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Professional Conversations within Self-Contained Classrooms: The Shared Perspectives of Teachers, Paraprofessionals, and Administrators

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Professional Conversations within Self-Contained Classrooms:
The Shared Perspectives of Teachers, Paraprofessionals, and Administrators

by

Travis Brett Henderson

A dissertation submitted to the
Department of Leadership, School Counseling, and Sport Management

in partial fulfillment of the requirements for the degree of

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Dedication

I dedicate this dissertation to my Granny Hubbard (Mary Lillian Smith Hubbard).

You always had a book in hand and were the only one who read more than me.

You inspired me with your musical talents and the ease at which you played the piano.

You sparked my interest in genealogy and learning about our family history.

You shared a sense of humor with me that no one else could be a part of.

You modeled how to treat others with respect and when to say “no” if they disrespect you.

You had a sense of independence bounded by a stubbornness that could not be deterred.

You went to college in a time that not many women were able to choose that path.

You changed the very path that was set before you and made one for yourself.

You became a teacher and never stopped learning.

I will never stop missing you each and every day. I want to grow up to be you.

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As I near the end of this process of writing a dissertation, I hear more frequently the congratulations from people as I give them an update. These congratulations tend to be accompanied by “I know you have worked so hard for this!” I never know what kind of expressions I make at people, but I can only imagine that I end up giving them a funny look because the only reason that I am finishing this doctoral program is by the support of the many individuals who have helped me get to this point.

The earliest and most instrumental support that has been given to me was from my parents, Bobby and Bettie Henderson. I was privileged in this life to grow up in a family with a father with a Master’s degree in Civil Engineering and a mother who was able to stay at home and take care of me and my four siblings. Both of my parents worked tirelessly and experienced extreme sacrifices so that I did not. I only learned much later in life that the reason I did not have so many chores is because I read so much. There are too many lessons that I have learned from my parents to write here without creating a second dissertation, but the greatest is that if I want something, then I must show initiative in making it happen. My parents were the perfect parents for me, and they provided me with just the right level of supports to allow me to be successful. I would not want them to have changed anything that they did as I developed into the person I am today.

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They are the ones who have helped give meaning to the content from each course as we each have tried to use our experiences to gain an understanding over Educational Leadership. Five of us are on the path to graduating this semester. Our cohort goal is to beat the odds and make sure that we each make it to this point. I look forward to learning about new topics as I become available to provide the supports to help us each meet this goal.

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Abstract

Paraprofessionals in self-contained settings are often involved in helping students to learn the skills to manage their behaviors. A need has been identified for paraprofessionals to join teachers in professional development opportunities in order to better meet the needs of the students who receive their services (Konza & Fried, 2012). By recognizing paraprofessionals as vital members of a student's educational team (Boudreau & Twigg, 2011), informal professional development opportunities throughout the school day, such as professional conversations, may provide paraprofessionals with opportunities to share their experiences with each other and with their teachers, as well as to make collaborative decisions about how to support students' efforts to meet their behavioral goals.

The purpose of this study was to explore the shared perspectives of teachers, paraprofessionals, and school administrators about professional conversations between teachers and paraprofessionals in self-contained classrooms for students with autism spectrum disorder (ASD) and/or emotional and behavioral disorders (EBD) in supporting students' efforts to meet their behavioral goals. Q methodology was chosen in order to take an exploratory approach to gain access to the viewpoints of teachers, paraprofessionals, and administrators about these professional conversations. This study involved 37 participants that included 15 teachers, 14 paraprofessionals, and 8 administrators from five schools with self-contained ASD or EBD classrooms. Four factors were found in this study. Natural Communicators seem to find opportunities throughout the day to communicate about behaviors. Guided Communicators seem to need structure to ensure that they join the conversations about behaviors. Expert Communicators seem to have learned how to put the necessary supports in place to promote

professional conversations and remove the barriers that inhibit them. Hierarchical Communicators seem to value the role of the teacher as the classroom leader and the hierarchical structure found within school systems. With further research and an expansion of these factors into a more complete theory, this may be a worthwhile line of research to help administrators find a way to balance the needs of each member of their staff within self-contained classrooms for students with ASD and/or EBD and to ensure that professional conversations are occurring to improve student outcomes.

Chapter 1: Introduction

Students with autism spectrum disorder (ASD) and emotional and behavioral disorders (EBD) often have problem behaviors that act as barriers to learning (Koegel, Singh, & Koegel, 2010; Wehby, Lane, & Falk, 2003). Positive behavior supports can be used to help proactively manage these behaviors (Fitzgerald, Geraci, & Swanson, 2014; Lane, Menzies, Ennis, & Bezdek, 2013), but school leaders must ensure that individuals who work closely with students with problem behaviors receive training to effectively use those strategies and interventions. In order to maintain their certification, teachers must meet state requirements by engaging in professional development and have many different options available to them. These options include, but are not limited to, college courses, workshops, conferences, seminars, observations of other teachers, opportunities to network with other teachers, individual or collaborative research, mentoring, coaching, reading professional literature, and engaging in informal conversations (Mahmoudi & Özkan, 2015).

On the other hand, paraprofessionals, who also play an important role in serving students in special education programs, are not bound by certification requirements at the federal level (U.S. Department of Education, 2004) and may not necessarily be required to engage in professional development practices depending on individual state and school district requirements. Section 1119 of Title I, as amended by the No Child Left Behind Act, requires that paraprofessionals have completed at least 2 years of college coursework, have obtained at least an Associate's degree, or have passed a formal state or local academic assessment demonstrating their knowledge and ability to assist in instruction, reading, writing, and mathematics (U.S. Department of Education, 2004). Only 14 states have requirements that

exceed these federal requirements: Georgia, Hawaii, Illinois, Maine, Minnesota, Mississippi, Nebraska, New Hampshire, New Mexico, New York, Oklahoma, Rhode Island, Washington, and West Virginia (Baber, 2005). These requirements include possessing a credentialing system, standards for paraprofessional roles and preparation, and/or standards for the supervision of paraprofessionals (Pickett, Likins, & Wallace, 2003).

The use and need for paraprofessionals have dramatically increased over the last 60 years starting in the 1950s with the rise of the Baby Boomer generation and the need to find teachers (Pickett et al., 2003). In the 1960s and 1970s, the federal government passed legislation to establish and support instructional services for students with educational and economic disadvantages and also what later became the Individuals with Disabilities Education Act (Pickett et al., 2003). Also during this time, the federal government provided support and access to teacher education programs for paraprofessionals who wanted to work while studying to become teachers (Pickett et al., 2003).

Given the important role that paraprofessionals play, research has suggested a need for paraprofessionals to be included in professional development opportunities (Konza & Fried, 2012). Beyond this concern for professional development opportunities for paraprofessionals, teachers carry the responsibility to supervise their paraprofessionals (U.S. Department of Education, 2004) yet are often not trained on how to provide that supervision or how to train their paraprofessionals (French, 1998; Bauman, Silla, & Stufft, 2010; Chopra, Banerjee, DiPalma, Merrill, & Ferguson, 2013; Hugesh & Valle-Riestra). For instance, Hughes and Valle-Riestra (2008) found that 64% of teachers reported that they had attended training for how to work with paraprofessionals. However, Bauman et al. (2010) found that 80% of new teachers

has less than an hour of coursework on learning how to work with paraprofessionals and that, of these teachers, 93% indicated that they did not have any assignments about working with paraprofessionals.

Additionally, single-event workshops alone may not provide paraprofessionals with the same quality of training opportunities to generalize skills into the classroom as would workshops that are paired with performance feedback from the paraprofessionals' supervising teacher (Hall, Grundon, Pope, & Romero, 2010). Even so, Darling-Hammond, Wei, Andree, Richardson, & Orphanos (2009) identified that job-embedded collaborative learning is not a common form of professional development across most schools in the United States indicating that more opportunities are needed to engage in feedback through collaboration.

In comparison, teachers tend to have more opportunities to engage in collaborative professional development with other teachers. These opportunities include professional learning communities (PLCs) and communities of practice (CoPs) (Carrejo, Cortez, Reinhartz, 2010; Carter, Swedeen, Walter, & Moss, 2012; Gleeson & Tait, 2012; Law, Wan, Galton, & Lee, 2010; Lovett & Cameron, 2011; Thoonen, Slegers, Oort, Peetsma, & Geisel, 2011). These types of collaborative professional development opportunities focus on sustained and continual learning across time rather than a single training event. As such, Darling-Hammond et al. (2009) concluded that professional development that is intensive, ongoing, and connected to practice has a greater chance of impacting teaching practice.

In a speech at the National Press Club, Weingarten (2010) described collaboration in terms of what it can be:

Imagine a system in which teachers have time to come together to resolve student issues, share lesson plans, analyze student work, discuss successes and failures, and learn through high-quality professional development. Imagine a system in which students can't fall through the cracks because they're backed by a team of teachers, not just the one at the front of the room.

Now imagine a system in which teachers *and* paraprofessionals more readily work together to improve student outcomes.

Researchers have suggested that paraprofessionals would also benefit from collaborative opportunities (Konza & Fried, 2012; Boudreau & Twigg, 2011). Boudreau and Twigg (2011) concluded that paraprofessionals are members of a school's educational team and must be made a priority to be included when building a community of adult learners. However, many paraprofessionals only work during student contact hours (Rueda & Monzó, 2002), and PLC meetings often occur before or after school. With paraprofessionals largely limited to working during the school day, finding a way to increase the likelihood of the occurrence of collaborative learning in the classroom during the school day may be the best solution to providing paraprofessionals and teachers with informal professional development opportunities to learn from each other in finding solutions to problem behaviors in the classroom.

However, Williamson et al. (2010) provided a warning about over-complicating collaboration by emphasizing requirements from frameworks because it might make collaborating more complex for school staff. There are also times that a collaborative approach may not be successful such as when groups simply reinforce the status quo, are unable to make lasting changes due to the school culture or environment, or tend to quickly agree to decisions as

a way to avoid conflict with each other (Stanley, 2011; Rousseau, 2004). Stanley (2011) explained that “[a] community can support uniformity or mediocrity as much as creativity or innovation” (p. 73).

Problem Statement

Paraprofessionals in self-contained settings are often involved in helping students to learn the skills to manage their behaviors but are not required to complete professional development by the State of Florida as part of continuing education requirements (U.S. Department of Education, 2004; Baber, 200). However, a need has been identified for paraprofessionals to join teachers in professional development opportunities in order to better meet the needs of the students who receive their services (Konza & Fried, 2012). Moreover, teachers may not be adequately prepared to train paraprofessionals (French, 1998; Bauman et al., 2010; Chopra et al., 2013). By recognizing paraprofessionals as vital members of a student’s educational team (Boudreau & Twigg, 2011), informal professional development opportunities throughout the school day may provide paraprofessionals with opportunities to share their experiences with each other and with their teachers, as well as to make collaborative decisions about how to support students’ efforts to meet their behavioral goals.

Through the use of surveys, Breton (2010) reported that 15.9% of 260 paraprofessionals in Maine never received consultation from their supervising teacher regarding instruction for students while 60.5% received consultation at least weekly. Additionally, Rudea and Monzó (2002) reported that teachers and paraprofessionals had few opportunities to interact in part because of paraprofessionals’ working hours. As one teacher stated about planning with paraprofessionals:

I think the key is that it [planning] has to be a priority. This is something we have to do.

We have to meet. We have to talk. We have to communicate. Once you prioritize it as a team, people will make time to do it. ...You have to get flexible with your schedule.

(Chopra, 2011, p. 21)

Purpose Statement

The purpose of this study is to explore the shared perspectives of teachers, paraprofessionals, and school administrators about professional conversations between teachers and paraprofessionals in self-contained classrooms for students with autism spectrum disorder and/or emotional and behavioral disorders in supporting students' efforts to meet their behavioral goals.

Research Question

As part of this exploratory approach, Q methodology was chosen as the research methodology. Watts and Stenner (2012) explained that a Q methodological research question must take into account the nature of Q methodology by being organized in a way that a participant is able to respond to the question and is aligned with the condition of instruction that allows the participant to sort the statements in the Q set along a single, face valid dimension such as "most agree" to "most disagree". For this study, a research question was developed to gain an understanding of the conditions that impact professional conversations in a classroom about behaviors: What are the shared perspectives of teachers, paraprofessionals, and administrators regarding what impacts professional conversations between teachers and paraprofessionals in supporting students' efforts to meet their behavioral goals?

Significance of the Study

Adds to scholarly research. There is a gap in the literature about collaboration and the professional conversations that occur between teachers and paraprofessionals as a form of professional development. This study will provide factors based upon the perspectives of teachers, paraprofessionals, and administrators to explore what may impact professional conversations about student behaviors between teachers and paraprofessionals in self-contained classrooms. Information gained from this study may create pathways for expanding research on the topic of professional conversations as a form of informal professional development between teachers and paraprofessionals that could have future implications for practice and policy.

Improve practice. The result of this Q Methodological study will produce factors for how teachers, paraprofessionals, and administrators perceive what impacts professional conversations about student behaviors within self-contained classrooms. Once these factors are known, school and district administrators may be better able to understand the possible supports and barriers that exist for professional conversations that may be used to open additional opportunities for collaboration and professional development. Some of these opportunities may take the form of informal professional development opportunities in the classroom throughout the school day with teachers and paraprofessionals sharing their experiences with each other in professional conversations as part of working together to support students' efforts to meet their behavioral goals. Knowing these factors may also help school and district administrators to prevent learning communities from failing (c.f. Rousseau, 2004; Yamagata-Lynch, 2001) by putting conditions in place to better support their professional conversations (Danielson, 2016; Fisher and Rogan, 2012). Finally, school and district administrators may better understand how

to join informal professional conversations themselves without being evaluative in nature (Clark et al., 1996; Haigh, 2012).

Improve policy. As a whole, school districts have a responsibility to grow and develop as a learning organization. As Senge (2006) explained, “Organizations learn only through individuals who learn. Individual learning does not guarantee organizational learning. But without it no organization learning occurs” (p. 129). Louis (2006) explained that the concept of professional learning communities entered into research literature in 1992 as a way to bring reform to school culture at the individual school level compared to the dominant emphasis on reforming curriculum and expectations for learning found at the national level.

Similarly, this study is important from a policy standpoint by providing administrators with a rationale for an alternative to imposing top-down initiatives upon teachers and paraprofessionals to engage in professional development (c.f. Craig, 2009). Instead, a bottom-up approach can be helpful to schools and district administrators by helping them to better understand the barriers that inhibit opportunities for frequent collaboration and to help identify supports that can be put in place to encourage teachers and paraprofessionals to more readily seek out informal professional development opportunities such as collaborative problem solving through professional conversations. Abbate-Vaughn (2007) emphasized the need for integrating the voices of paraprofessionals into the conversations that lead to policy changes by better understanding their roles.

Summary

School leaders must ensure that individuals who work closely with students with challenging behaviors receive training to effectively use those strategies and interventions.

Training opportunities for teachers are generally readily available given their requirements for continuing education for recertification. By comparison, paraprofessionals often have fewer formal opportunities for trainings. The common expectation is that teachers will provide this training for their paraprofessionals. However, paraprofessionals often arrive and leave with the students, thus limiting their ability to receive such training before or after school. Taking advantage of professional conversations throughout the school day may help solve this issue of finding times to train paraprofessionals. The research question for this study is: What are the shared perspectives of teachers, paraprofessionals, and administrators regarding what impacts professional conversations between teachers and paraprofessionals in supporting students' efforts to meet their behavioral goals? Understanding the potential barriers and supports for the occurrence of professional conversations within the classroom, may serve as practice and policy implications to help school and district leaders to set up conditions to encourage these professional conversations as a form of informal professional development.

Chapter 2 discusses four main topics: 1) collaboration within professional development, 2) informal professional development, 3) professional conversations, and 4) training for paraprofessionals. These topics were selected as part of an exploratory process in reviewing the current literature about collaboration between teachers and paraprofessionals and for helping to understand possible barriers and supports for collaboration between teachers and paraprofessionals in order to facilitate professional conversations that may serve as informal professional development. Path-Goal Theory of Leadership and motivating operations from Applied Behavior Analysis were used as theoretical frameworks to examine these barriers and supports from a behavioral perspective.

Chapter 3 describes how the concourse development interviewees were selected to develop the concourse. Then, their responses were narrowed down to develop the statements that made up the Q set which was given to the participants (P set) in the study to sort based upon the condition of instruction: What best reflects your perspective regarding what impacts professional conversations between teachers and paraprofessionals in supporting students' efforts to meet their behavioral goals?

Chapter 4 explains how the PQMethod 2.11 analysis software was used to analyze the correlation matrix using principal component analysis and how varimax factor rotation was used to extract four factors. In addition to the factor array that the PQMethod 2.11 software produced, post sort questionnaire data was used to assist with interpretation of the identified factors. Finally, factor narratives are provided for each of these four factors: Natural Communicators, Guided Communicators, Expert Communicators, and Hierarchical Communicators.

Chapter 5 discusses the data obtained during the concourse development phases as well as the four factors extracted from the Q sort phase. Next, the strengths of the study are discussed along with the limitations. Then, the implications of this study are discussed. Finally, recommendations for future research are given.

Chapter 2: Literature Review

Within this literature review, four main topics will be explored: 1) collaboration within professional development, 2) informal professional development, 3) professional conversations, and 4) training for paraprofessionals. These topics were selected as part of an exploratory process in reviewing the current literature about collaboration between teachers and paraprofessionals during informal learning situations. Criteria for selecting articles included variations of combinations of the following keywords: teachers, paraprofessionals, paraeducators, collaboration, professional learning communities, communities of practice, informal learning, and professional conversations.

First, collaboration within professional development is important for sharing ideas and practices. Second, informal professional development provides opportunities for teachers to further collaborate beyond what may be initiated in formal professional development. Third, professional conversations are one approach to learning through informal professional development that can be as simple as a dialog between two individuals. Fourth, training for paraprofessionals, in part, consists of on-the-job training and guidance from their supervising teacher that would be categorized as a form of informal professional development. These topics are important for helping to understand possible barriers and supports for collaboration between teachers and paraprofessionals in order to facilitate professional conversations that may serve as informal professional development. Path-Goal Theory of Leadership and motivating operations from Applied Behavior Analysis were used as theoretical frameworks to examine these barriers and supports from a behavioral perspective.

Collaboration Within Professional Development

Several topics were discovered while reading the literature about collaboration within professional development. First, what is collaboration? There are many different variations in its definition depending on who is asked. Second, interprofessional collaboration is an important part of the medical field in understanding how people from different professions interact and work together to serve their patients. In the field of education, this type of collaboration is discussed to a lesser extent among teachers, speech language pathologists, occupational therapists, and other school personnel, yet school professionals share similar issues with interprofessional collaboration as that found within the medical field. Third, learning communities are used to facilitate learning among school personnel and require collaboration. Finally, sustainability is often challenging to balance within learning communities.

What is collaboration? Collaboration may be defined in different ways depending on the people and the purpose involved. For collaboration between teachers and librarians in a primary, elementary, and middle school, Montiel-Overall (2008) described:

Collaboration is a trusting, working relationship between two or more equal participants involved in *shared thinking, shared planning and shared creation of integrated instruction*. Through a shared vision and shared objectives, student learning opportunities are created that integrate subject content and information literacy by co-planning, co-implementing, and co-evaluating students' progress throughout the instructional process in order to improve student learning in all areas of the curriculum. (p. 150)

This definition of collaboration and its emphasis on a relationship between equal participants and on sharing the problem is an important distinction from what is described as consultation: “an

indirect model of delivering educational and mental health services whereby a professional with specialized expertise (i.e., consultant) and a staff member (i.e., consultee) work together to optimize the functioning of a client in the staff member's setting" (Erchul & Sheridan, 2014, p.

3). Consultation may involve collaboration and a working relationship between two equal participants, but "the consulting relationship exists only because it is perceived that the consultee, not the consultant, has a work related problem" (Friend & Cook, 2010, p. 86).

Collaboration cannot always be achieved and there are times that it may not be appropriate.

Montiel-Overall (2008) also reported that participants described collaboration as "thinking together and sharing resources and expertise to benefit themselves and their students. They also agreed that it was a process of give and take, which could result in something greater than could have been produced alone" (p. 149). Similarly, Bruner (1991) described that "[c]ollaboration" is a process to reach goals that cannot be achieved acting singly (or, at a minimum, cannot be reached as efficiently). As a process, collaboration is a means to an end, not an end in itself" (p. 6). Bruner (1991) also listed the following elements as being included within collaboration: "jointly developing and agreeing to a set of common goals and directions; sharing responsibility for obtaining those goals; and working together to achieve those goals, using the expertise of each collaborator" (p. 6).

Alternatively, Miao, Umemoto, Gonda, and Hishinuma (2011) described collaboration as an essential element for community engagement in evidence-based youth violence prevention which helps to "[n]urture cooperation and collaboration, [build] hope and efficacy with small short-term successes and [move] towards larger, longer-term efforts" (p. 126). It is not that everyone does everything together, but that everyone gains from the interaction (Clark et al.,

1996).

Using a factor analysis approach with 374 questionnaires completed by respondents in seven states from elementary schools, secondary schools, district offices, and institutes of higher education, Welch and Tulbert (2000) identified five components of collaboration:

Flexibility is defined as the ability to compromise, accept change and new ideas.

Communication skills are characterized as listening, ability to express ideas, and use appropriate body language. *Problem solving* includes the skills of identifying needs, brainstorming, evaluation, and adjustment of plan of action. *Action plan development* includes identifying activities, needs, steps for addressing the issue or dilemma.

Evaluation, monitoring, readjustment, and feedback are conceptualized as conducting on-going assessment of the action plan and modifying as needed. (p. 369)

Similarly, Montiel-Overall (2008) identified several themes involving the structure of conditions for high-end teacher and librarian collaboration. Two prerequisites of collaboration were identified that included a school culture that was integrated and possessing a sense of community and congeniality (Montiel-Overall, 2008). The other prerequisite, attributes of collaborators, included being flexible, willing to make changes to accommodate others, open to sharing what they think, non-judging, willing to establish personal relationships, friendly, willing to listen, willing to become a mentor, patient, willing to share their resources and students, their level of expertise, and demonstrating leadership by treating others as equals and motivating others without domineering (Montiel-Overall, 2008).

Interprofessional collaboration. Montiel-Overall's (2008) study about collaboration between teachers and librarians hinted at the need for better interprofessional collaboration.

Mellin, Bronstein, Anderson-Butcher, Amorose, Ball, and Green (2010) defined interprofessional collaboration as “teamwork with individuals from other professions” (p. 515) that is complemented by Bronstein’s (2003) definition as “an effective interpersonal process that facilitates the achievement of goals that cannot be reached when individual professionals act on their own” (p. 299).

Interprofessional collaboration has been studied among many different groupings of professionals within the medical community. These studies included doctors, their palliative home care teams, and their trainers (Pype et al., 2012); doctors and nurses in a neonatal clinical care unit (Aydon, Martin, & Nathan, 2014); physicians and nurses in intensive care units (Thomas, Sexton, Helmreich, 2003); health profession students from programs in medicine, nursing, midwifery, physician assistants, physical therapy, occupational therapy, and diagnostic medical imaging (Hope et al, 2005); nurses, occupational therapists, social workers, psychiatrists, and psychologists within a community mental health team (Larkin & Callaghan, 2005); and among hospice staff such as nurses, social workers, aides, doctors, volunteers, chaplains, managers, and secretaries (Oliver, Wittenberg-Lyles, & Day, 2006). These professionals must work together to meet the needs of their patients.

There is no one right way to collaborate. In fact, Bronstein (2003) identified five components of interprofessional collaboration: the interdependence of the professionals that is needed in order to accomplish their goals, newly created professional activities that allow individuals to accomplish more together than they would have alone, flexibility and role blurring, collective ownership of goals that are client centered, and reflection on the process of working together. Additionally, several influences on interprofessional collaboration may aid or

create barriers such as the professionals' role and their allegiance toward their profession or their interprofessional team, the structural characteristics of the work setting and the team itself, personal characteristics and how team members view each other, and the history of collaboration (Bronstein, 2003).

Furthermore, several factors affect the quality of interprofessional collaboration such as the competence of team members, team arrangements, task descriptions, and communication (Pype et al., 2013). Communication in particular was identified as a problem between doctors and nurses (Pype et al., 2012; Aydon et al., 2014; Thomas et al., 2003). Interestingly, doctors have rated communication and working together with nurses higher than nurses did in regards to working with doctors (Aydon et al., 2014; Thomas et al., 2003). This finding was attributed to members on the team who fall on the lower end of the hierarchical structure who may not speak up, whereas doctors may be more inclined to voice their concerns because they fit higher in the hierarchy (Aydon et al., 2014; Sayre et al., 2012).

On the education side of interprofessional collaboration, survey results of forty-five occupational therapists (OTs) in South Australia indicated a high level of agreement with practices that are indicative of collaboration but that these practices were not implemented frequently (Kennedy & Stewart, 2012). Kennedy and Stewart (2012) also noted that the OTs were neither satisfied nor dissatisfied about their low levels of collaboration. Interestingly, Bose and Hinojosa (2008) reported that only one out of the six OTs interviewed described collaboration in terms of its outcomes, whereas the other five focused on the process. Additionally, all six OTs had difficulty giving examples of their interactions with teachers to fit the definition that they constructed for collaboration (Bose & Hinojosa, 2008). Bose and

Hinojosa (2008) concluded that occupational therapists' views of their expert status impeded their ability to collaborate with teachers, possibly because most of their interactions involved offering recommendations instead of attempting to foster a more collaborative relationship. Offering recommendations sounds more like consultation rather than collaboration that involves a two-sided interaction between equal participants (c.f. Montiel-Overall, 2008).

Similar to the relationship between doctors and nurses, a clear hierarchy exists with teachers being responsible for supervising and providing directions to paraprofessionals. This power differential could have an effect upon their relationships with each other. Although, in a study with 103 school personnel in four schools in Vermont that included general education and special education teachers, paraprofessionals, and school administrators, Giangreco (2001) reported that paraprofessionals' voices were well heard by teachers and administrators when giving ongoing input about students. However, paraprofessionals did express their concerns about teachers meeting during the day when the teachers have a common planning time while the paraprofessionals must stay with the students (Giangreco, 2001). On the other hand, when meetings were held after school hours so that paraprofessionals could attend, they had to do so without pay (Giangreco, 2001).

Given these definitions provided by various researchers, collaboration has many facets and may mean different things to different individuals. Kennedy (2011) discovered this during interviews with teachers and key informants from stakeholder organizations involved with continuing professional development in which one teacher described collaboration as just sitting and listening to wiser colleagues, whereas another interviewee described collaboration as the school culture transforming into that of a professional learning community with teachers seeking

answers to their questions. Based upon these individual definitions from participants, Kennedy (2011) concluded that there are three levels of engagement in collaborative continuing professional development: “Being beside others (Co-location)... [t]alking with others (Co-operation)... [and] [e]ngaging with others (Collaboration)” (p. 32). Based upon this model, collaboration is the highest level of engagement within continuing professional development and is a necessary part of learning communities.

Learning communities. A common form of collaborative professional development within many school districts is the use of professional learning communities (PLCs) and communities of practice (CoPs). Because of the flexibility found within PLCs and CoPs, there is no one definition to describe them.

Hord (1997) described professional learning communities as “communities of continuous inquiry and improvement” (p. 6). Whereas, Huffman (2011) described PLCs as “professionals in the school as they work collectively and purposefully to create and sustain an instructional culture for all students and adults” (p. 333), but she pointed out a lack in consistency when describing professional learning communities since PLCs are often used to describe small groups as well as large school-wide groups.

Similar to professional learning communities, communities of practice were described by Lave and Wenger (1991) as:

a set of relations among persons, activity, and world, over time and in relation with other tangential and overlapping communities of practice. A community of practice is an intrinsic condition for the existence of knowledge, not least because it provides the interpretive support necessary for making sense of its heritage. Thus, participation in the

cultural practice in which any knowledge exists is an epistemological principle of learning. The social structure of this practice, its power relations, and its conditions for legitimacy define possibilities for learning. (p.98)

Wenger (2000) later described communities of practice as an essential part of learning that makes up the core of what allows us to learn as human beings. CoPs were also described as being held together by passion and commitment and lasting as long as there is interest in maintaining the group (Wenger & Snyder, 2000). Additionally, there are three dimensions of communities of practice: mutual engagement, a joint enterprise, and a shared repertoire (Wenger, 1998).

PLCs can take many forms such as parent led conversations with community members to promote inclusion within their children's schools (Carter et al., 2012); to guide new teachers by establishing a learning culture for development, retention, and to preserve job satisfaction (Lovett & Cameron, 2011); to collaborate in order to make decisions about curriculum (Law et al., 2010), and to improve teaching practices (Thoonen et al., 2011). Prytula (2012) concluded that PLCs are an effective structure for facilitating teacher professional development given that teachers' metacognition was encouraged within the PLC setting. Teacher reflection is an important component of fostering a successful professional learning community (Prytula, 2012; Rousseau, 2004).

Similarly, communities of practice have been used to increase science scores of students in an English as a second language program (Carrejo et al., 2010) as well as to facilitate development during a study abroad experience (Gleeson & Tait, 2012). The purpose of both PLCs and CoPs is to form a learning community and to learn from each other.

Sustainability of learning communities. Butler et al. (2004) described the challenges of providing enough support to teachers in a learning community as well as avoiding dependence upon outside expert trainers, but at the same time creating a self-sustaining learning community. In order to develop sustainable cultures, Huffman (2011) listed several observations for assisting educators that included:

While the principal is the key player in school reform, broad and inclusive leadership is imperative for implementation and accountability. Dialogue focused on shared goals is the key to communication and progress. Supportive conditions such as trust and respect are essential to address collective learning and growth. In schools, attention needs to shift to the human side of change—developing relationships that ultimately make everything possible. The move from school management to instruction leadership addresses student needs more effectively. Involving the entire school community (parents and central office) is critical in developing an inclusive and supportive culture. (p. 334)

Unfortunately, PLCs are often administratively mandated, which may inhibit collaboration due to factors such as paperwork requirements and misaligned schedules (Jones & Dexter, 2014). In many ways, these mandated PLCs take on the form of more formal professional development in what Owen (2014) described as “contrived collegiality”. Stanley (2011) differentiated between such administratively introduced PLCs and knowledge communities that form and are based upon teachers’ practices. These more organic communities would be described as informal professional development. Because of its more informal nature,

communities of practice tend to be resistant to supervision and interference by management, which make building and sustaining CoPs difficult (Wenger & Synder, 2000).

Interestingly, teachers have recognized that more formal professional development opportunities often have led to informal learning opportunities where teachers are able to collaborate and focus on what was meaningful to them (Jones & Dexter, 2014). For instance, Butler, Lauscher, Jarvis-Selinger, and Beckingham (2004) found that teachers preferred an initial workshop to orient themselves using a common framework in order to then guide them through learning within their learning communities afterwards.

Informal Professional Development

Based upon the literature, three main topics were discovered about informal professional development within schools. First, what is informal learning? By its nature, there are many variations in which informal learning can take form. Second, informal professional development practices found in the literature will be explored. Finally, several influences affect these informal professional development practices.

What is informal learning? At first thought, informal learning may seem to be the opposite of formal learning and that they form a dichotomous pair; however, both can be described as being related and as necessary parts of learning in general (Eraut, 2004; Grosemans, Boon, Verclairen, Dochy, & Kyndt, 2015) and as a continuum (Eraut, 2004; Kastener, 2014). Yet, informal learning “provides a simple contrast to formal learning or training that suggests greater flexibility or freedom for learners” (Eraut, 2004, p. 247).

Eraut (2004) further described informal learning in terms of the significance of learning from others and as complimenting the learning that occurs from experiences, as well as what is

learned from more formal learning opportunities. One way to view informal learning is as a continuum with formal learning on one end and informal learning on the other. Eraut (2004) described the characteristics of the informal end of this continuum as including “implicit, unintended, opportunistic and unstructured learning and the absence of a teacher” (p. 250). Whereas, the middle of the spectrum would be more aligned with mentoring, and the formal end would be closer to activities such as coaching (Eraut, 2004).

Richter, Kunter, Klusmann, Lüdtke, and Baumert (2011) distinguished formal learning opportunities “as structured learning environments with a specified curriculum, such as graduate courses or mandated staff development” (pp. 116-117) versus informal learning opportunities that:

do not follow a specified curriculum and are not restricted to certain environments... [and] include activities such as reading books and classroom observations as well as collaborative activities such as conversations with colleagues and parents, mentoring activities, teacher networks and study groups. (p. 117)

Practically, both formal and informal learning opportunities are needed as part of professional development (Richter et al., 2011).

However, informal learning does not necessarily have to be exclusive from formal learning settings. Thacker (2015) described from an interview with one of twelve social studies teachers in what amounted to an off-task interaction between two Social Studies teachers about comparing class websites while at a Common Core English Language Arts training. This off-task interaction led to one teacher helping the other improve student access to their website. Even as teachers described professional development “as anything from a necessary evil to a

waste of time” (Thacker, 2015, p.6), teachers are able to take advantage of a situation to socialize and exchange ideas with their colleagues (Thacker, 2015). These teachers may not even realize that learning has occurred.

Eraut (2004) explained several problems in conducting research about informal professional develop such as informal learning being mostly invisible, the knowledge gained may be tacit knowledge or held as part of a person’s capabilities, and participants may have difficulty describing the complex nature of what they know and what their work involves. Participants may also think of the word “learning” as formal education and not also as what may be gained during their everyday work (Eraut, 2004).

Unfortunately, informal talks with colleagues tended to not be viewed as informal learning by teachers (Van Eedkelen et al., 2005) possibly because informal learning is mostly invisible and teachers lack awareness that they are learning from such activities (Eraut, 2004). Conversations may be perceived as trivial and non-serious, especially if they are just passing conversations (Haigh, 2012).

Based upon focus group interviews at two middle schools in the United States, Jones and Dexter (2014) found that teachers engaged in informal learning primarily through email and through conversations with other teachers, teachers from other schools, school administrators, library staff, district personnel, and their friends. Teachers had explained that even quick 2-minute conversations in the hallway were enough to gain needed information (Jones & Dexter, 2014). However, an interviewed teacher explained that this was possible at their school because of being able to respect and know each other as professionals as opposed to the culture at another

school in which she taught where it seemed that teachers were supposed to know everything (Jones & Dexter, 2014).

An alternative to the formal-informal continuum model, Jones and Dexter (2014) described a holistic system for teacher learning involving formal professional development that may be district initiated, informal teacher learning that is teacher initiated with other teachers, and independent teacher learning which is also teacher initiated. Informal learning may serve the purpose to account for limitations that teachers may experience in formal learning situations such as time constraints, a set structure, and lack of on-going support (Jones & Dexter, 2014).

In a more general description of learning, Van Eekelen, Boshuizen, and Vermunt (2005) described that “learning is ideally a (1) self-regulated, (2) planned, (3) spiral, (4) reflective process and (5) involves a behavioral change” (p. 464). In other words, these components are essential in that the learner (1) takes control of their learning, (2) sets out with a purpose and a path, (3) circles back to try what they learned in new settings which is aided by (4) reflection based upon what was learned, and in the end (5) their practices are impacted by what they learned. Van Eekelen, Vermunt, and Boshuizen (2006) later explained that “although continued professional development may be a necessity, it cannot be taken for granted” (p.408).

Sometimes when people struggle with something new, they return to what is old and familiar (Van Eekelen et al., 2006; Hoekstra, Brekelmans, Beijaard, & Korthagen, 2009) in part because routines are difficult to change and learning something new disrupts these routines (Eraut, 2004).

To help facilitate successful teams, Jones, Ratcliff, Sheehan, and Hunt (2012) recommended several components of joint professional development such as

“providing opportunities to: 1) develop an understanding that they work as partners within a team to accomplish shared goals; 2) identify and appreciate the strengths and unique characteristics that each member brings to the team; 3) develop communication skills needed for the sharing of ideas and concerns; and 4) share expectations that team members have for each other. This joint training is most likely to be successful if both parties view themselves as lifelong learners.” (p. 23)

Informal learning is an important part of lifelong learning and has been included as a part of a priority area to encourage lifelong learning in the European Union (The Council of the European Union and the Representatives of the Governments of the Member States, 2008). In James and McCormick’s (2009) Learning How to Learn project, they moved away from learning as a “psychological property of learners (such as a disposition or general ability) and towards seeing it as a set of practices that can be developed by students to help them to learn autonomously, in new settings, when teachers are not present to support or encourage them. These would be crucial for lifelong learning” (p. 974). However, even college teachers struggle with taking what they learn and applying that knowledge to a new setting (Van Eekelen, Boshuizen, & Vermunt, 2005).

Informal approaches to learning are not just limited to adults. Four Midwest music teachers participated in a professional development community to promote informal music learning within classrooms that was facilitated by Kastner (2014) as part of a case study. Three themes were identified: teachers experimented with various practices from research articles and made modifications for their music lessons with students, pedagogical practices fell on a continuum of teacher versus student control or on a continuum of teacher scaffolding, and the

four teachers began to find value in this new approach to informal music learning as these activities helped students to become motivated and independent musicians (Kastner, 2014).

James and McCormick (2009) emphasized that teachers learning how to learn is equally as important as students learning how to learn. By extension, learning how to learn is a skill that all people need, children and adults, and that life-long learning is everyone's reality. Finding ways to foster and encourage informal learning opportunities among teachers and paraprofessionals may help to automatize the practices that may lead to learning with each other to benefit their students instead of reverting back to more routine and comfortable learning practices.

Informal professional development practices. There are a variety of professional development practices among teachers. For example, U.S. teachers reported participating in individual or collaborative research, regularly scheduled collaboration with other teachers, peer observation, and mentoring/coaching during the 2003-2004 school year (Darling-Hammond et al., 2009). Among secondary teachers in the Netherlands with at least five years of teaching experience, Hoekstra et al. (2009) found that 27 out of 32 teachers reported experimenting within their classrooms, 30 reported reflecting on their own teaching practice, 22 reported learning by doing, and 21 reported getting ideas from others. Through interviews and observations, Eraut (2004) found four main types of activities in which learning occurred: participation in group activities, working alongside others, tackling challenging tasks, and working with clients. Similarly, Van Eekelen, Boshuizen, & Vermunt (2005) conducted a phenomenographic study using fifteen college teachers in the Netherlands who participated in semi-structured interviews as well as a digital diary in which they wrote by email three times a week for a month. Four

types of teacher learning strategies were identified through the email diary entries including learning in interaction, learning by doing, learning by reading, and learning by thinking (Van Eekelen et al., 2005).

However, while some teachers used the diary emails as a form of reflection, others did not appreciate the activity including one teacher in particular who said:

You have to reflect, you have to think, and that's something I don't like. I try to avoid that. I don't have time for it. That means that I find other things more important than thinking about myself, about my own learning. (Van Eekelen et al., 2005, p. 458)

Additionally, Van Eekelen et al. (2005) found several barriers to learning such as having no time or lacking motivation to learn, as well as factors that stimulated learning such as students' final projects; however, what was inhibiting for one college teacher may have been stimulating for another such as sharing a space with a colleague versus having a nice quiet space to themselves.

Through a mixed method approach using semi-structured interviews and a questionnaire about school culture and informal learning with elementary school teachers in Belgium, Grosemans et al. (2015) found a more extensive list in which teachers participated in experimenting within their classrooms, reflecting about their teaching, reading articles or magazines about teaching, discussing lessons with other teachers, sharing self-made teaching materials, and asking others for help. Interestingly, Grosemans et al. (2015) found a difference between beginning and experienced primary school teachers where beginning teachers tended to experiment less, read and sought less information, and provided less feed back to other teachers, but beginning teachers did ask more questions and asked for help more than experienced teachers.

Influences on teacher professional development practices. The Grosemans et al. (2015) results seem to support an earlier study about the differences between beginning and experienced primary teachers of 198 German schools with 1,939 math teachers who ranged in age from 25 to 65 (Richter, Kunter, Klusmann, Lüdtke, and Baumert, 2011). Richter et al. (2011) examined professional development by using Huberman's (1989) career stage model: survival and discovery, stabilization, experimentation/activation and stocktaking, serenity and conservatism, and disengagement. They found that more formal in-service training increased in use with age until about age 42 when a sharp decrease in use occurred. This confirmed their hypothesis that formal learning opportunities were used more in the middle of the teachers' careers, such as during the experimentation and activism phase (Richter et al., 2011). It is important to note that Germany did not require teachers to attend professional development trainings in order to renew their teaching license, which may impact how German teachers make decisions about professional development compared to teachers in the United States.

In contrast to their second hypothesis that teachers would increase their collaboration until the middle of their career before decreasing, Richter et al. (2011) found that teachers gradually decreased collaboration with age and attributed this result to younger teachers generally being the ones to seek out more experienced teachers for help. Additionally, the researchers reported a gradual increase with age for the use of professional literature, contrary to their hypothesis, and was attributed to older teachers seeking more self-directed learning in place of collaboration with other teachers or attending in-service trainings (Richter et al., 2011).

Another influencer of professional development practices involves school culture. In an ethnographic study by Jurasaitė-Harbison and Rex (2010), elementary school teachers in the

United States and Lithuania were examined based upon their view of school cultures as the context for their informal learning and how they pursued professional development. Through interviews with eleven teachers, five dominant themes were discovered about school culture that included school mission, traditions, architectural features of the school that may allow for spaces for informal learning, organizational arrangement, and professional relationships (Jurasaitė-Harbison & Rex, 2010). The authors concluded that teachers are more likely to engage in informal learning when a school's physical and social environment allow professional interactions, teachers and administrator find purpose in collaboration, teachers and administrators are aligned with educational policies, opportunities to collaborate with outside sources are available and encouraged, teachers view informal learning as part of their professional responsibilities, and national policies and the school's history provide for a stable and positive environment (Jurasite-Harbison & Rex, 2010, pp. 275 - 276).

As an example of the impact of school culture, in a national initiative in England, the Primary Schools Whiteboard Expansion, Lewin, Scrimshaw, Somekh, and Haldane (2009) found through a mixed method study that by installing interactive whiteboards over their traditional boards caused teachers to immediately begin implementing the new technology but also begin to see the advantages of its use. By having so many other teachers beginning to use the interactive whiteboards at the same time, they formed learning groups that allowed the expertise from the consultants sent out to the schools to shift toward the teachers themselves as well as to strengthen professional learning communities that already existed within those schools and in some cases extended out to a cluster of schools that linked together (Lewin et al., 2009).

Several other factors influencing professional development practices have been identified. In a mixed methods study using questionnaires in southern England with 40 secondary, primary and infant schools, James and McCormick (2009) identified factors regarding the dimensions of teacher learning: inquiry using research either individually or with other teachers, building social capital while interacting with others, critical and responsive learning, and valuing their own and their students' learning.

Eruat (2004) also identified three interrelated learning factors that included challenge and value of the work, feedback and support, and confidence and commitment (p. 269). Additionally, three interrelated context factors were identified that included allocation and structuring of work; encounters and relationships with people at work; and expectations of each person's role, performance, and progress (p. 269). Together, the learning factors and context factors relate to work itself, relationships at work, and the individual worker, respectively (Eruat, 2004).

In addition, factors regarding school management practices were also identified such as deciding and acting together with staff, developing a plan using a clear vision and with gaining staff commitment, supporting professional development with formal and informal training opportunities, and auditing expertise and supporting networking both within the school and with other schools (James & McCormick, 2009).

In a follow-up study that examined the journal entries of ten teachers in the United States and Lithuania, Jurasite-Harbison and Rex (2013) identified two types of teacher dispositions toward learning: reactive learners that passively took up opportunities to learn as they arose and proactive learners who actively sought out what they needed to learn. These dispositions do not

exist as a dichotomous pair since a teacher may exhibit both reactive and proactive learning, but Jurasite-Harbison and Rex (2013) noted that some teachers tended to present one disposition over the other. Teachers who were more aligned with a reactive disposition tended to be less analytically reflective and more emotional about informal learning; whereas, teachers who were more aligned with a proactive disposition tended to be more targeted toward resolving an issue (Jurasite-Harbison & Rex, 2013). Thus, Jurasite-Harbison and Rex (2013) proposed a different typology of non-formal learning that included implicit learning, reactive learning, and deliberate learning.

Similarly, Van Eekelen et al. (2005) found that college teachers experienced spontaneous learning in which something else initiated the situation, non-linear learning in which an unexpected event happened but the person decided to solve the problem, and planned learning in which the person decided what and how to learn something. Two-thirds of the learning situations from the college teachers' diary emails were spontaneous and non-linear learning, both of which the authors described as unplanned learning (Van Eekelen et al., 2005).

Professional Conversations

Based upon the literature, four main topics were discovered about professional conversations as part of professional development. First, what are professional conversations? There are many different forms that professional conversations may take that could be described as a continuum. Second, some types of professional conversations may be more effective than others depending on the purpose of the conversation. Third, reflection plays a large role within professional conversations in order to turn it into a learning conversation. Finally, There are several conditions that may impact the quality of a professional conversation.

What are professional conversations? Professional conversations have many forms including feedback provided by mentors or supervisors (Danielson, 2016; Killion, 2015; Langdon, 2014; Ussher & Carss, 2014), regular and structured discussions as part of action research (Fisher & Rogan, 2012), the guided discussions and unpredictable tangents that occurred during lunches with graduate students (Tallman & Smith, 2014), the redirection to polite topics when individuals were uncomfortable with topics such as diversity (Russo & Beyerbach, 2001), the storytelling of a group's experiences in collaboration (Clark et al., 1996), the dialog between teacher educators in a pub about the highlights and disappoints of the day about their students during a study abroad experience (Scheider & Parker, 2013), or the unplanned everyday conversations with colleagues about learning and teaching (Haigh, 2012). Additionally, Haigh (2012) described conversations as a continuum with "spontaneous, totally undirected conversations" on one side and "guided conversations" on the other (p. 14). One end fits Haigh's (2012) everyday conversations when running into colleagues around campus or Scheider and Parker's (2013) pub talk about their student teachers. Whereas, the other end fits Langdon's (2014) description that professional learning conversations are "the dialogue that takes place between individuals with the intention of meeting the needs of the mentee and promoting learning for all participants in an exchange of ideas" (p. 40).

However, Danielson (2016) pointed out the limitations of traditional feedback from a supervisor and its role in teacher learning:

"In a traditional observation, the supervisor visits the classroom, the supervisor takes notes, the supervisor writes up the observation notes, the supervisor returns, and the supervisor tells the teacher about the lesson. It's important to recognize who is doing the

work—the supervisor! Actually, all that’s necessary for the teacher is that he or she *endures* the conference; eventually, the supervisor will stop talking and the teacher can leave. Thus, it is scarcely surprising that teachers don’t learn much as a consequence of the traditional supervision process; they aren’t *doing* anything. (p. 4)

In the context of Killion’s (2015) typology of feedback, a continuum exists for a learner’s responsibility/control/engagement when receiving feedback with one side belonging to the external control of the person giving the feedback and the other belonging to the internal control of the person receiving the feedback who should be learning from it. These types of feedback include desistance, correction, approval/disapproval, attribution, evaluation, assessment, analysis, construction, and deconstruction (Killion, 2015). The responsibility of learning largely rests on the provider of the feedback as long as it consists of telling the learner to stop doing something (desistance), to do something else (correction), providing approval or disapproval, giving a compliment (attribution), evaluating a practice based upon a criteria, or even assessing the learner in order to determine where they place in meeting a criteria (Killion, 2015). Based upon Killion’s (2015) continuum, it is largely the last three types of feedback that place greater responsibility upon the learner to begin to internalize and learn from that feedback: analysis, construction, and deconstruction. What makes these three types of feedback different from the other six types in the continuum is that the learner is asked to respond to their own performance and make meaning out of it as part of a conversation with a learning partner.

Dialog over discussion. The types of conversations may make a difference. Haigh (2012) suggested finding opportunities to make conversation more likely, seeking out those opportunities for conversations, and avoiding shifting those conversations into a discussion.

Within discussions, one person may become more dominant in shaping the direction of the conversation rather than having a simple dialog that each individual has a more equal part in conversing (Haigh, 2012). This dominance tends to change the tone of the conversation and compromises the likelihood of maintaining openness, permissiveness, risk-taking, and storytelling (Haigh, 2012).

In comparison during a dialog, the positions that participants take tend to represent a starting point for conversations that may be abandoned, modified, or added to instead of an end point that must be defended such as in a discussion (Haigh, 2012). By approaching conversations with dialogue as the primary exchange, power differentials may be leveled in order to focus on understanding the work of each other (Clark et al., 1996). Also, giving all members in a conversation group a voice opens individuals to be able to engage in storytelling (Clark et al., 1996; Haigh, 2012) which has the benefits of sharing norms and values, developing trust and commitment, sharing tacit knowledge, facilitating unlearning, and generating an emotional connection (Sole & Wilson, 2002).

In a qualitative study that transcribed the conversations of a collaborative group of ten teachers and researchers, Clark et al. (1996) found that they could meet the needs of both teachers and researchers by being willing to be flexible in their roles and work together through mutual respect and by seeking to understand one another's perspectives. In some cases, the researchers became co-teachers in order to model a teaching practice, but it was their conversations that allowed them to experience shared learning and to develop their own unique strengths (Clark et al., 1996). Clark et al. (1996) explained that their successful collaboration

involved increasing their understanding of each other's perspectives and roles through a shared dialogue rather than just shared work.

However, in contrast, within an action research case study with ten self-contained classroom teachers, a discussion format was used with procedures set up to encourage participation and risk-taking by all participants including an agreed upon agenda, structured conversation protocols, graffiti boards, and group interviews (Fisher & Rogan, 2012). Through structured conversations, group members began to view each other as a support network over the course of the study, and as one participant stated: “[T]he coming together and sharing process is invaluable—both in keeping us to the commitment of the research, and in getting new ideas from others. It builds a support system and a sense of collegiality that is not available in our respective buildings (Fisher & Rogan, 2012, p. 135).

As a counter point, by giving a conversation partner control in a collaborative setting, this may off-set the balance among the individuals. As a teacher from the Clark et al. (2012) study explained about the researcher/teacher relationship:

If we feel ourselves subject to judgment rather than description, there are likely to be negative responses, especially if we don't have ways to include our own reflections in the ongoing work... I think there are genuinely valuable contributions for teachers to make if they feel they can say what they think without sanction. We are so rarely able to voice our opinions in meaningful ways I think we don't know how or when our opinions might be valuable. That is one of the reasons I value our collaboration so highly—because I have felt unconstrained in my opinions... While our meetings at the school are extremely

valuable, they are not as open as the kinds of informal discussions I've been privileged to have." (Clark et al., 1996, p. 214)

Yet, as another teacher expressed, "I did, however, appreciate their [the researchers'] stance of being nonjudgmental" (Clark et al., 1996, p. 214).

The value of reflection. Haigh (2006) stressed the value of reflection when paired with professional conversations to become what Senge (2006) described as "learningful" conversations:

The discipline of working with mental models starts with turning the mirror inward; learning to unearth our internal pictures of the world, to bring them to the surface and hold them rigorously to scrutiny. It also includes the ability to carry on 'learningful' conversations that balance inquiry and advocacy, where people expose their own thinking effectively and make that thinking open to the influence of others. (Senge, 2006, p. 8)

In a mixed method study, Langdon (2014) examined the conversations between 13 teacher mentors and their novice teacher mentees. Through self-analysis, one mentor recognized that she did not communicate clearly and tended to jump from one idea to another and in the process tended to interrupt her mentee's participation in conversations and reflection (Langdon, 2014). Another mentor admitted that her approach consisted more of advice and guidance, but then she learned to be more specific and began setting negotiated goals with her mentee that changed the types of conversations that they engaged in. These changes required focus not only on the mentee's development but also on that of the mentor's.

Similarly, in an autoethnography using narrative inquiry practices, Schneider & Parker (2013) explored the impact of a study abroad experience on professional development. Both

researchers were leading a class of 18 pre-service teachers in Cambridge, England over the summer. At the end of each day, Schneider and Parker (2013) met at a pub to talk about and reflect upon their day, and much of their dialog consisted of complaints about students' abilities and their disappointment over the student teachers' underperformance. However, by reflecting back upon these conversations, they were able to critique themselves as teacher educators and the program that they had designed for their student teachers. "At home, our talks wouldn't have happened. But in Cambridge we had the time and lack of distraction to make space for these conversations (Schneider & Parker, 2013, p.9). As a result, Schnieder and Parker (2013) were able to make plans for improving the next study abroad experience, such as addressing the disconnect between their courses and the field experiences, providing more field experience before the trip, and providing co-teaching experiences first to ease students into their practicum.

Conditions that may impact the quality of professional conversations. As Danielson (2016) explained:

Informal professional conversations occur within a complex web of relationships and understandings in a school. These cannot be imposed from above or from without; they must be cultivated within the school itself. And because the site administrator is the individual with the greatest positional authority, that individual has an obligation to take the initiative in creating the conditions for productive professional conversations. (p. 87)

These conditions include finding time for conversation, communicating with purpose, and establishing trust (Danielson, 2016). Additionally, Fisher and Rogan (2012) found several key factors for how conversations impacted its participants as a community of learners: safety in being able to take risks, developments in group identity that led to members becoming change

agents, the perception of professional development that mattered, and the disparity between the ideals found in research and the realities found in the classroom.

In a mixed method study in New Zealand (Ussher & Carss, 2014), two researchers supervised seven student teachers during a three-year distance learning Bachelor of Teaching program. The program used an alternative practicum supervision approach that allowed the researchers to maintain supervisory roles during the whole three-year program using email and phone conversations as well as at least five visits from the researchers at the student teachers' sites (Ussher & Carss, 2014). Overall, the student teachers reported that they felt less stress, more confidence, and more comfortable during these visits because of having established a professional relationship with the researchers through email and phone conversations. These modes of communication gave opportunities to discuss current progress and to provide opportunities for reflection, theorizing, discussion of future focus, and receiving feedback, especially since the researchers were involved throughout the whole process (Ussher & Carss, 2014). However, one student teacher did express concern over the researchers' conflicting roles as a supportive liaison versus a critical evaluator when providing feedback on experiences (Ussher & Carss, 2014).

In an another autoethnography using a narrative analysis, Tallman and Smith (2014) examined the process of creating a director's lunch program as a way to give graduate students an opportunity to voice their concerns and provide feedback on their needs. From the informal, semi-guided discussions, the researchers were able to build stronger relationships with graduate students and realized that these students needed a safe space to talk about their experiences and receive mentoring (Tallman & Smith, 2014).

Through attending structured conversations about inclusionary practices in schools as part of action research, teachers saw these conversations as an opportunity to take risks in a safe environment (Fisher & Rogan, 2012). In one example, a teacher described how she volunteered to be interviewed by the whole group and was comforted by expressing, “I’m unsure and doubtful of myself and what I do,” (p.135) and then by hearing others express the same doubts. However, individuals from the same study indicated within written reflections that they would not share their perspectives at times out of fear of shutting down conversations, such as when other teachers used deficit language to describe students when discussing inclusionary practices (Fisher & Rogan, 2012).

Similarly, in a case study of 42 teachers from urban and rural settings in New York during a two-week summer institute, Russo and Beyerbach (2001) focused on teachers’ reactions of moving from polite conversations about diversity toward engaging in candid confrontation about these issues. Participants who attempted to extend these candid conversations about diversity tended to be perceived as challenging good intentions, rude, demanding, or inconsiderate, so the conversations tended either to turn to silence or to shift toward personal or more pleasant topics (Russo & Beyerbach, 2001). In helping the teachers maintain conversations about this difficult topic, Russo & Beyerbach (2001) found that it helped when teachers considered their own assumptions, examined their own teaching materials, and challenged their own teaching practices. Also, several helpful characteristics were identified that helped movement toward candid confrontation: “a welcoming atmosphere, a comfortable setting, establishing trust, the project’s positive reputation, caution in presenting a threatening topic, a

variety of options for responding, and opportunities to avoid the conversation at times” (Russo & Beyerbach, 2001, p. 87).

Training for Paraprofessionals

Based upon the literature, four main topics were discovered about training for paraprofessionals. First, who are paraprofessionals? Paraprofessionals have a wide range of titles and demographics. Second, the federal government mandates that paraprofessionals who provide instructional support work under the direct supervision of a teacher (U.S. Department of Education, 2004). Third, types of trainings for paraprofessionals will be explored. Finally, the training topics needed for paraprofessionals will be examined.

Who are paraprofessionals? Paraprofessionals within schools are referred to by a variety of different titles including paraprofessionals, paraeducators, assistants, teacher assistants, teaching assistants, aides, teacher aides, individual assistants, individual aides, instructional assistants, paras, para-pros, and other less common titles (Broer, Doyle, Giangreco, 2005; Etscheidt, 2005; Brown & Devecchi, 2013; Giangreco, Edelman, & Broer, 2001; Giangreco, Smith, & Pinckney, 2006). Paraprofessionals within schools are generally female, but there is variation in the percentages based upon the type of school: elementary, middle, or high school. Carter, Rourke, Sisco, and Pelsue (2009) reported that among 313 paraprofessionals from a Midwestern state who completed a questionnaire, 90.4% were female. At the elementary level, 95.3 % were female (n = 173) compared to 81.8% (n = 66) at the high school level (Carter et al., 2009).

Nearly a half (46.9%) of paraprofessionals had 0 to 5 years of experience, 31.1% had 6 to 10 years of experience, 11.0% had 11 to 15 years, 7.1% had 16 to 20 years, and 3.9 had 21 or more years of experience (Carter et al., 2009).

The paraprofessionals in Carter et al.'s (2009) study indicated that they worked with students with a variety of exceptionalities: autism (79.2%), cognitive disabilities (74.8%), emotional disturbance (74.1%), Deaf-Blind (11.2%), learning disabilities (82.4%), etc.

Carter et al. (2009) reported that paraprofessionals indicated that they worked primarily within special education settings (27%), primarily general education settings (33.0%), and both settings equally (39.3%). Carter et al. (2009) also reported that paraprofessionals indicated that they primarily used group instruction (19.2%), one-on-one instruction (38.4%), or both instructional formats equally (42.3%).

Through a survey of 25 items, paraprofessionals indicated that they frequently engaged in a variety of activities such as reinforcing concepts that the teacher has already taught, assisting behaviors, monitoring students outside the classroom, and assisting in daily planning (Hughes & Valle-Riestra, 2008). There were also several activities that they indicated that they rarely or never engaged in such as participating in developing individualized education plans for students, administering formal assessments, and implementing health-related duties (Hughes & Valle-Riestra, 2008).

When given the same survey, teachers responded similarly to paraprofessionals except that teachers responded that paraprofessionals created instructional materials less as well as that paraprofessionals were involved in observing and recording student progress less often than what paraprofessionals reported doing (Hughes & Valle-Riestra, 2008). Similarly, Jones et al. (2012)

reported that paraprofessionals indicated doing several activities more often than what teachers reported that their paraprofessionals did: working with the whole class, assessing students, managing behaviors, modifying activities to meet a student's needs, reading to students, helping students with personal hygiene, and assisting students to other locations. However, based upon observational data of 24 paraprofessionals, Jones, Ratcliff, Sheehan, and Hunt (2012) reported that paraprofessionals were mostly involved in managing student behavior and providing direct instruction, in which whole group instruction often occurred.

Supervision requirements. One of the challenges of teaching within a self-contained classroom is training and supervising paraprofessionals. French (2001) reported that about half of teachers hold the responsibility of evaluating their paraprofessionals at the end of the year as opposed to the principal holding that responsibility. However, in some cases, only 64% of teachers reported attending training for how to work with paraprofessionals (Hughes & Valeriestra, 2008), and 80% of new teachers had less than an hour of coursework on how to work with paraprofessionals (Bauman et al., 2010). The roles of paraprofessionals have changed over time and many paraprofessionals serve the role of teaching assistants (Brown & Devecchi, 2013). It is important that both teachers and paraprofessionals learn the skills to work together to serve their students.

When regular training and supervision meetings are provided for paraprofessionals who function as individual aides in an inclusion type of classroom, their confidence increases and they begin to feel like experts (Marks, Schrader, & Levine, 1999). Unfortunately, the certified teachers may begin to rely upon the individual aide too much to make curricular decisions, make on the spot decisions, and teach the student, all of which are roles that the teacher is responsible

for (Marks et al., 1999). It is important that the role of the paraprofessional is clearly defined so that the duties of the teacher stay with the teacher (Giangreco, Edelman, Broer, & Doyle, 2001). However, when the teacher is out, the paraprofessional tends to be the one who must take charge, regardless, because they know the routine and students better than the substitute teacher (Abbate-Vaughn, 2007).

Providing autonomy to paraprofessionals to do their jobs while also ensuring proper supervision from a teacher may seem to be counterintuitive. However, Maggin, Wehby, Moore-Partin, Robertson, and Oliver (2009) provided an integrated approach for supervising paraprofessionals who work with students with emotional and behavioral disorders that included four steps: define paraprofessional roles, train paraprofessionals to fulfill those roles, evaluate paraprofessional performance, and ongoing collaboration with paraprofessionals.

Alternatively, Rueda & Monzó (2002) suggested an apprenticeship model in which teachers and paraprofessionals form a collaborative relationship for professional development purposes. In fact, Jones et al. (2012) recommended that teachers and paraprofessionals view themselves as partners in their classroom and engage in joint professional development in order to learn to work together as members of an instructional team.

Types of training for paraprofessionals. Carter et al. (2009) reported when paraprofessionals were asked in a questionnaire about the types of training they received on a list of 15 topics relevant to paraprofessionals, on the job training was reported as the most common form of training (48.7%) compared to in-service training (25.5%), other forms of unspecified training (15.3%), and conference training (10.5%).

However, Giangreco, Broer, & Edelman (2002) reported that often times paraprofessionals were hired and placed within classrooms with little to no training except for the on the job training that was immediately given. School districts may offer more formal training opportunities, but those opportunities may not provide paraprofessionals with what they really need to help with their specific jobs (Giangreco et al., 2002). Furthermore, even among teachers, Butler et al. (2004) reported that teachers stressed the need to have a new skill modeled within their classroom as well as receiving constructive criticism when learning a new practice from a workshop. One teacher in particular explained the need for initial professional development and then follow-ups to be able to ask questions, try new things, and expand their skills (Butler et al., 2004).

Additionally, workshop training alone has either shown that paraprofessionals' skills were not generalizing as well to the classroom or that a decrease in skills over time occurred compared to when follow-up feedback was provided by a supervising teacher (Hall et al., 2010). Hall et al., (2010) used a multiple baseline research design across settings with five paraprofessionals to evaluate the effects of a one-day workshop followed by performance feedback from their supervising teacher. A multiple baseline design allows for a comparison between baseline and intervention stages through staggered implementation that allows the later implementations to act as control settings for the earlier implementations. Compared to baseline data, Hall et al. (2010) reported a slight initial increase in paraprofessionals' correct use of effective strategies learned in the workshop followed by a return to baseline levels and then a clear increase in correct use of effective strategies once the staggered feedback phase began for individual participants.

In a similar study using a multiple baseline design across participants, three paraprofessionals attended a one-hour workshop about socialization strategies for students with autism spectrum disorder, viewed video clips of paraprofessionals successfully and unsuccessfully implementing the socialization strategies, were guided through identifying students' interests and how to set up and maintain social interactions using those interests, and later were observed by the workshop presenter who then provided feedback if needed (Koegel, Kim, & Koegel, 2014). Koegel et al. (2014) reported a clear change in paraprofessionals' use of the socialization strategies even when follow-up observations occurred three weeks after the intervention phase.

In another study using a multiple baseline design across three classrooms for students with emotional and behavioral disorders, paraprofessionals attended a training on general classroom management strategies, watched the researchers model their group contingency program, and then role-played to practice the steps and receive feedback from the researchers (Maggin, Fallon, Sanetti, & Ruberto, 2012). Then, the researchers provided an in-class demonstration of the group contingency program and gave performance feedback to the paraprofessionals during later observations. Maggin et al. (2012) reported that this training program helped paraprofessionals to implement the group contingency program within their classrooms during phases with and without performance feedback and then continued implementing the program through weekly maintenance probes.

Teachers, too, have emphasized that workshops are not enough to change their own practices without on-going support from their collaborative learning community (Butler, 2004). Hughes and Valle-Riestra (2008) reported that 75% of teachers ($n = 59$) and 83% of

paraprofessionals (n = 52) responded that on the job training was as critical as going to workshops. In fact, one paraprofessional explained, “My most valuable training was in the classroom because I don’t care what book you read, the best experience is hands-on and that’s where I really learned” (p. 169).

As a counter case-in-point, when Jones et al. (2012) worked with district administrators to provide a half-day targeted training within the classroom about scripted, small group literacy instruction to paraprofessionals, the 24 paraprofessionals still had the same difficulties during small group instruction held after as before the training with the exception of improvements in time management skills. The researchers and district administrators concluded that something more than a brief, isolated training was needed as an effective tool for professional development for paraprofessionals (Jones et al., 2012).

On the other hand, in a randomized, controlled trial study, a follow-up training package using video modeling and in-person coaching was effective in training paraprofessionals to use a time delay before prompting students to respond compared to a control group that produced the poorest results (Brock & Carter, 2015). Specifically, Brock and Carter (2015) found that the one-to-one coaching with performance feedback was the most powerful part of the training package. This may be attributed to being able to find gaps and poorly implemented practices from the training and correcting the paraprofessionals to perform them as intended.

Identified training needs for paraprofessionals. Carter et al. (2009) reported five areas that 313 paraprofessionals received the most training on: basic educational terminology (88.5%), rules and procedural safeguards for managing student behaviors (87.9%), purposes of student programs (87.5%), effects of disabilities on a student’s life (84.0%), and ethical practices

concerning confidential communication (83.7%). In a similar study, Hughes and Valle-Riestra (2008) reported that the most common topics that paraprofessionals received training for were school specific curriculum, behavior management, and child development and care.

When paraprofessionals were asked about their training needs, Carter et al. (2009) reported that they indicated a considerable need for training on assistive technology (34.8%), completing disability-specific paperwork (32.4%), assisting with speech therapy (29.5%), assisting with physical or occupational theory (29.3%), and behavior management (27.4%).

During observations, Jones et al. (2012) identified concerns that while providing small group instruction, paraprofessionals rarely kept to the script, had difficulty managing instructional time, had difficulty understanding the literacy skills that students were being taught, and had trouble keeping students on-task and engaged in the lesson.

Giangreco, Edelman, and Broer (2003) described a process of providing support to paraprofessionals in which 46 schools across 13 states assessed their schools' needs for paraprofessional supports, identified priorities, developed a plan, implemented the plan, and then evaluated it. The results of using this process included paraprofessionals better understanding their roles, improved morale among paraprofessionals, increased awareness of the value of paraprofessionals among non-paraprofessionals, paraprofessionals knew their students better, increased retention of paraprofessionals, improved delivery of instruction, improved student achievement, increased student inclusion, improved student behavior, and increased peer interactions among students. This process of identifying the supports needed for paraprofessionals involved asking paraprofessionals themselves as well as teachers, parents, and administrators (Giangreco et al, 2003).

Theoretical Frameworks

Path-Goal Theory of Leadership. Path-Goal Theory of Leadership is primarily a theory of motivation which draws from expectancy theories and describes how individuals engage in a behavior due to their expectations that a specific outcome will occur and that the outcome will provide the satisfaction that they seek (House, 1971). Individuals will work harder if they perceive that effort will lead to what they highly value (House & Mitchell, 1974). However, barriers often interfere with an employee's path to reaching their goal. Therefore, the leader's responsibility "consist[s] of increasing personal pay-offs to subordinates for work-goal attainment, and making the path to these pay-offs easier to travel by clarifying it, reducing road blocks and pitfalls, and increasing the opportunities for personal satisfaction en route" (House, 1971, p. 324).

Initially, leaders were described as being able to help remove these barriers through two types of leader behaviors: initiating structure and consideration (House, 1971). Initiating structure is a type of physiological support, whereas, consideration is a type of psychological support. House & Mitchell (1974) later described four types of leader behaviors: directive leadership, supportive leadership, participative leadership, and achievement-oriented leadership. Then, House (1996) eventually reformulated his theory to describe eight classes of leader behaviors that included clarifying behaviors, achievement oriented, work facilitation, supportive, interaction facilitation, group oriented decision process, representation and networking, and value based.

The worth of Path-Goal Theory has been in describing the leader's role in terms of different behaviors that they may choose from based upon their own set of abilities (House,

1996). These leader behaviors are relevant in discussing possible ways that principals can remove the barriers that prevent teachers and paraprofessionals from collaborating more naturally within the classroom setting. However, one more theory of motivation would be helpful in explaining conditions that may facilitate or impede collaboration.

Motivating operations. The world can be simplified by using Skinner's (1953) three-term contingency to view human behavior in terms of the observed behavior, the antecedent to that behavior, and the consequence that follows the behavior. These three terms, antecedent-behavior-consequence, are commonly referred to as the ABCs of behavior. Skinner (1953) also discussed motivation in terms of needs and drives, of which Michael (2000) expanded upon over the years to describe in terms of establishing and abolishing operations. Laraway, Snyckerski, Michael, and Poling (2003) have since refined these terms as the more general term of "motivating operation" as part of the four-term contingency. The four-term contingency is a way to incorporate what others may call "motivation" into the model, but from a behaviorist point of view.

In its simplest components, motivating operations are described as having two properties: a value-altering effect that impacts the value of a reinforcer or punisher, and a behavior-altering effect that impacts the likelihood of a behavior occurring (Langthorne & McGill, 2009). For example, a novel toy may be very reinforcing compared to a toy that a child has had for three years (value-altering), and that child may be more likely to use a new sign to request for that new toy compared to an old toy (behavior-altering). Also, if someone has not eaten all day, any food may sound appealing compared to if they have just eaten a five course meal (value-altering), and they are more likely to put effort into finding food compared to if they have just eaten a very

large meal (behavior-altering). Finally, if someone is completely exhausted because they just ran up five flights of stairs, the smell of garbage in the kitchen may not smell as bad as when they are fully rested (value-altering), and they will be less likely to take the garbage out (behavior-altering).

A motivating operation can be categorized as either an establishing operation or an abolishing operation. An establishing operation increases the value of a consequence and increases the likelihood of a behavior occurring, while an abolishing operation decreases the value of a consequence and decreases the likelihood of a behavior occurring (Langthorne & McGill, 2009). Hunger and thirst are examples of establishing operations if those conditions increase the value of food or a drink and increase the likelihood of a person to seek out those items. On the other hand, tiredness and extreme heat would be abolishing operations if those conditions decrease the value of having a nice looking lawn and decrease the likelihood of going outside to mow the grass.

Georgopoulos, Mahoney, and Jones (1957) described within the Path-Goal Theory approach a very similar idea to motivating operations' value-altering and behavior-altering effects:

[I]ndividual productivity is, among other things, a function of one's motivation to produce at a given level; in turn, such motivation depends upon (a) the particular needs of the individual as reflected in the goals toward which he is moving, and (b) his perception regarding the relative usefulness of productivity behavior as an instrumentality, or as a path to the attainment of these goals (p. 345).

A need places a value upon that goal and Evans (1970) described path-goal instrumentality as “the extent to which the path is seen as helping or hindering the individual in attaining his goals” (p. 279). This perception of instrumentality carries a likelihood of the behavior occurring using a scale from -1 to 1 (c.f. Evans, 1970). Motivating operations is useful for this study as part of the theoretical framework to explain how events can alter the value of a consequence (i.e. what is gained/lost by meeting a goal) as well as alter the likelihood of a behavior occurring (i.e. the path to reaching the goal and the likelihood of taking one path over another). Together, motivating operations and Path-Goal Theory can help to explain both the barriers and supports that are present to guide an educational leader to helping their followers meet their goals.

The researcher’s perspective.

As a Board Certified Behavior Analyst, I view the world in terms of the four-term contingency. Behaviors have a trigger and are maintained by consequences, and certain conditions affect the value of those consequences and the likelihood of that behavior occurring. Additionally, I was drawn to Path-Goal Theory of Leadership early in this educational leadership doctoral program, and as I later learned that this theory has its origins as a theory of motivation, I see its relevance to complement motivating operations through the barriers and supports that affect individuals reaching their goals. I see an overlap between abolishing operations and barriers as well as between establishing operations and the supports that leaders provide. These two theoretical frameworks will be used in the following two sections to explain the possible motivating operations in a given situation. See Figure 1 for a concept map.

Barriers to Collaboration

At times learning communities may become less productive or even fail. Using the two theoretical frameworks in this study, this failure may be attributed to barriers that are preventing the learning community members from reaching their goals (Path-Goal Theory) and/or it could be that certain setting events are in place that act as abolishing operations that decrease the value of the consequences of meeting that goal and decrease the likelihood of engaging in behaviors that result in meeting that goal (motivating operation).

One reason for this failure may be a lack of self-reflection by its members to resolve the differences between their vision of success and the actual outcomes (Rousseau, 2004). In fact, Rousseau (2004) described in a case study how math teachers in Houston formed a learning community to bring reform to their curriculum to better prepare their students for Algebra by incorporating independent work and class discussions on the strategies that students learned, yet they ended up blaming the students for not being like the students in the training videos and ultimately returned to their previous approach of using worksheets. These math teachers had good intentions: to provide better learning opportunities for their students. However, Rousseau (2004) argued that the teachers were unable to confront the inconsistencies in their visions for reform because they wanted to maintain peace among themselves. Avoiding confrontations also may have an effect upon collaboration among learning community members whether it may be ignoring problems (Bose & Hinojosa, 2008) or differences in shared beliefs (Rousseau, 2004). The interpretation I make in Rousseau's (2004) study is that mistrust among the teachers may have acted as an abolishing operation that decreased the value of making progress toward math

instruction reforms and decreasing the likelihood of reflecting together in order to align their expectations for reform with the outcomes of their teaching practices.

The structural framework within schools also has an impact upon their professional development. Most teachers spend their day isolated within their classrooms with little time available to collaborate with their peers (Hadar & Brody, 2010). Even with planning periods before and after students are at school, teachers reported having difficulty finding opportunities to meet in order to collaborate (Kennedy, 2011). In fact, many teachers view non-contact time as their own time to finish individual tasks (Kennedy, 2011). These situations can be viewed as abolishing operations by decreasing the value of teachers meeting their goals and decreasing the likelihood of teachers meeting to work toward those goals.

District policies may also impact the choices that teachers make in regards to professional development. For instance, elementary teachers in a Title I urban school district were told by administrators to focus only on Reading and Mathematics in an attempt to strengthen these areas in students, but lowered expectations for other subjects such as Science in which only four units a year were taught (Richmond & Manokore, 2010). In this case, the district policies forced a greater value on teaching Reading and Mathematics but reduced the value of teaching Science. Also, there was a decreased likelihood of focusing on science during professional learning community meetings, even in PLC groups for science teachers (Richmond & Manokore, 2010).

Additionally, resistance to technology as a means to collaborate and preference for face-to-face communication both pose as barriers for online PLCs (Kennedy, 2011). For this reason, the use of online PLCs may inhibit meaningful community building (Yukawa, 2010). These barriers pose as great challenges that some teachers have difficulty overcoming on their own and

can be described as abolishing operations that decrease the value of what is gained by collaboration and decreasing the likelihood of that collaboration from occurring.

Overall, there are several barriers that prevent PLCs from being successful. Structural barriers exist, such as scheduling issues that prevent teachers from finding the time to collaborate (Kennedy, 2011) and student supervision requirements that limit everyone's involvement at the same time (Schechter & Feldman, 2010). Teachers may also find difficulty in selecting similar topics in order to collaborate due to differences in departments or grade levels (Ghamrawi, 2013). Time itself is also a limited resource (Davidson & Nowicki, 2012; Kennedy, 2011). Occupational Therapists, as well, reported barriers to collaboration such as time constraints to meet with teachers, lack of teacher receptiveness to suggestions, and failure in communication with teachers (Bose & Hinojosa, 2008).

Supports for Collaboration

On the other hand, learning communities may become more productive and produce successful outcomes. Using the two theoretical frameworks in this study, this success may be attributed to supports from educational leaders that facilitate the learning community members in reaching their goals (Path-Goal Theory) and/or it could be that certain conditions are in place that act as establishing operations that increase the value of the consequences of meeting that goal and increase the likelihood of engaging in behaviors that result in meeting that goal (motivating operation).

One component that impacts what teachers gain from PLCs is the level of support that they receive from their administrators. As part of Path-Goal Theory, House (1971) described a leader as displaying two types of leadership behavior: initiating structure and consideration.

With initiating structure, a leader sets up physiological conditions that allow their followers to be successful, and consideration takes into account psychological supports.

There are many examples of psychological supports. School leaders can provide opportunities for intellectual stimulation (Thoonen et al., 2011), as well as empathy, attention, and listening (Shacham & Od-Cohen, 2009). However, moral support is not enough alone to provide the support that teachers need (Seyoum, 2011). The structure of the school environment must be established with the conditions necessary to facilitate teachers' development within their PLC. With these types of supports in place, an establishing operation is put in place that increases the value of the outcomes of learning communities and also increases the likelihood of collaboration occurring.

Acknowledgement of the worth of what teachers are working on may provide encouragement (Yamagata-Lynch, 2001). Yamagata-Lynch (2001) reported how some teachers in an Illinois school isolated themselves because other teachers viewed embedding technology into teaching practices more as indulging a hobby than as improving instructional skills. By forming a learning community with others of similar interests, these tech savvy teachers gained legitimacy in their professional development activities, ended their isolation, and became educational leaders for technology within their school district (Yamagata-Lynch, 2001). However, paraprofessionals clarified that acknowledgement is better valued from someone knowledgeable about their work instead of individuals such as district level specialists (Giangreco et al., 2001). Working in a setting where others appreciate your work and everyone may feel a sense of safety in sharing their work may be viewed as an establishing operation in which teachers value learning from others and are more likely to share those ideas.

The structural types of supports may take the form of working to change the culture of the school (Barr & Clark, 2011), providing guidelines and minimal standards to teachers (So, Lossman, Lim, & Jacobson, 2009), creating schedules that allow for easier collaboration with other teachers (Stephenson, Dada, Harold, 2012), providing incentives to faculty for trying new practices (Demir, Czerniak, & Hart, 2013), and, of course, allocating funding for professional development (Seyoum, 2011). Likewise, working in a setting with the structures in place to promote collaboration may increase the value of the outcomes of that collaboration and the likelihood of collaborating with others.

Summary

Chapter 2 discussed four main topics: collaboration within professional development, informal professional development, professional conversations, and training for paraprofessionals. These topics were selected as part of an exploratory process in reviewing the current literature about collaboration between teachers and paraprofessionals and for helping to understand possible barriers and supports for collaboration between teachers and paraprofessionals in order to facilitate professional conversations that may serve as informal professional development. Path-Goal Theory of Leadership and motivating operations from Applied Behavior Analysis were used as theoretical frameworks to examine these barriers and supports from a behavioral perspective.

Chapter 3: Methodology

Teachers are required to complete professional development in order to maintain their certification; however, the State of Florida does not require the same for paraprofessionals. Frequently, teachers serve the role of providing their paraprofessionals with on the job training, but teachers themselves often lack the training to train and supervise paraprofessionals. There exist continuous opportunities for teachers and paraprofessionals to hold professional conversations throughout the school day as a form of informal professional development, but there are many barriers that limit this type of interaction.

Major topic areas regarding this problem included collaboration within professional development, informal professional development, professional conversations, and training paraprofessionals. In this study two theoretical frameworks were used to view this issue: Path-Goal Theory of Leadership and motivating operations. By identifying possible supports and barriers for professional conversations between teachers and paraprofessionals, school leaders may be more prepared to reduce barriers that prevent professional conversations and help to create necessary setting events to encourage professional conversations within the classroom.

A Q methodology approach was used to answer the following research question: What are the shared perspectives of teachers, paraprofessionals, and administrators regarding what impacts professional conversations between teachers and paraprofessionals in supporting students' efforts to meet their behavioral goals?

First, concourse development interviewees were selected to develop the concourse and were given a concourse interview questionnaire with the following 2 questions: What helps teachers and paraprofessionals to engage in professional conversations to support students'

efforts to meet their behavioral goals? What prevents teachers and paraprofessionals from engaging in professional conversations to support students' efforts to meet their behavioral goals? Then, their responses were narrowed down to develop the statements that made up the Q set which was given to the participants (P set) in the study to sort based upon the condition of instruction: What best reflects your perspective regarding what impacts professional conversations between teachers and paraprofessionals in supporting students' efforts to meet their behavioral goals?

Afterwards, the PQMethod 2.11 analysis software was used to analyze the correlation matrix using centroid factor analysis and by-hand factor rotation. Four factors were extracted and found significant based upon eigenvalues. Interview data gathered during post-sort interviews was used to assist with interpretation of the identified factors.

Methodology

Howe and Eisenhart (1990) provided several standards for educational research, one of which called for a fit between research questions and the data collection and analysis techniques. By this standard, Q methodology is an appropriate choice as it is able to answer the research question of this study: What are the shared perspectives of teachers, paraprofessionals, and administrators regarding what impacts professional conversations between teachers and paraprofessionals in supporting students' efforts to meet their behavioral goals? McKeown and Thomas (2013) explained that the "primary purpose of undertaking a Q study is to discern people's perceptions of their world from the vantage point of self-reference" (p. 1). The current study will take an exploratory approach to gaining access to the viewpoints of teachers,

paraprofessionals, and school administrators about professional conversations within self-contained classrooms in supporting students' efforts to meet their behavioral goals.

Using Q methodology will allow the participants' viewpoints to be made operant and will allow these viewpoints to be understood holistically (Watts & Stenner, 2012) because "the task of Q methodological research is to interpret factors in their own right and this means in terms of the sorter's lived experience" (Delprato & Brown, 2002, p. 147) As such, Q methodology "provides researchers with a systematic and rigorously quantitative procedure for examining the subjective components of human behavior" (McKeown & Thomas, 2013, p. ix).

Q methodology is an appropriate approach to study an individual's point of view because there is no right or wrong response (Brown, 1993) and neither is it provable nor disprovable (McKeown & Thomas, 2013). "There is no outside criterion for a person's own point of view" (Brown, 1980, p. 4), and this is one of the differences between Q methodology and the more traditional positivist methodological approaches that Stephenson and subsequent Q methodologists described as R methodology. Stephenson (1953a) explained:

"R deals with the interdependency analysis of mental tests with respect to individual differences. The object is to discover 'primary' or 'unitary' factors, identifiable as the essential capacities or abilities of man. There are no such objectives in Q. Instead, experiments are conducted upon a single person, using certain *intra*-individual effects as basic technique, and it is these which are analyzed by factor and variance methods. (p. 110)

Additionally, in R methodology, the focus is on finding correlations between variables across a sample of participants; whereas, Q methodology focuses on the correlations between participants

across a sample of statements from the greater conversations of a given topic (Brown, 1980).

This is not to be confused with the misconception that Q methodology is simply an inverse factor analysis of what is typically used in R methodology (Brown, 1980) since both Q and R each seem to focus on the opposite of each other.

Another difference between Q and R methodologies is that Q methodology aims for meaning to be attributed *a posteriori* through the interpretation process (Watts & Stenner, 2012). The statements that the participants sort, the Q set, are not intended to hold predetermined, *a priori*, meanings. It is up to the participants to impress their own meanings and viewpoints during the sorting process (Watts & Stenner, 2012).

Operant Subjectivity Defined. Subjectivity is often defined as the opposite of objectivity. Stephenson (1953b) described confusion over the usage of objectivity and subjectivity where the commonly used definition of “objective” involves the scientific method and is observed by others, whereas “subjective” involves an inner experience that must be observed by the individual themselves and therefore must be the opposite of being scientifically objective by its very definition. This traditional behaviorist view of subjectivity would discount the value of subjectivity as nothing more than another mentalistic view (c.f. Cooper, Heron, & Heward, 2007).

Yet, one behaviorist provided a different conclusion in understanding the difference between objective and subjective. Skinner (1953) used the word “operant” to describe a class of responses in which a group of similar behaviors operates upon the environment in order to generate consequences. As such, an operant is not a single response, but a set of acts (Skinner, 1953; Delprato & Brown, 2002). For example, signing one’s name on documents does not

always look the same, especially when one is given the numerous paperwork involved in buying a house or a car. There are slight variations in each signature provided and there is no way of knowing how that signature will turn out until it is signed. Collectively, these signatures are a single operant since they provide the same consequence: access to one's purchased items.

Skinner (1953) also discussed studying private internal events by observing their related public events and explained that “[t]he line between public and private is not fixed. The boundary shifts with every discovery of a technique for making private events public. Within Q methodology, the Q factors are described as a class of responses, or an operant, and as such provide a way to bring private events into the public and thus to measure subjectivity (Delprato & Brown, 2002; Skinner, 1953).

Brown (1980) defined subjectivity as a point of view, and Watts (2011) described subjectivity as a person's current viewpoint. Watts (2011) also argued that Q methodology is “actually an objective science, but one that operates from the perspective of the *first* rather than the *third* person” (p. 38). Additionally, Brown (2002) had explained that:

the person whose perspective is under observation is also the person providing the Q-sort measure of that perspective; i.e., the “observer” is not the scientist, but the participant, who is observing his or her own point of view while providing a measure of it. (p. 157)

As McKeown and Thomas (2013) later explained, “In Q methodology, the observer and the observed are identical; only the individual can measure his or her subjectivity. This methodology seeks to reveal these subjectivities without confounding them with operational measurements” (p. 4). The participant's perspective, what behaviorists would typically consider introspective or mentalistic, is made operant by having the participant sort the statements in the Q set (Watts &

Stenner, 2012). As such, Q sorting is a way of capturing subjectivity and making it observable through the act of sorting statements based upon a participant's perspectives and the values they have attributed to the statements in relation to each other (Watts & Stenner, 2012). The traditional behaviorist practice of only studying observable behavior is met by allowing subjectivity to be made operant through the behavior of sorting these statements (Watts & Stenner, 2012).

Watts (2011) described the Q sort not as "an expression of someone's subjectivity" but as capturing "subjectivity in the very act of being an operant" (p. 39). Brown (2002) explained that Q methodology deals mostly with transitive thoughts that are captured at the moment of a Q sort and that we cannot predict in advance what a person might say at that moment, even the person themselves. Stephenson (2005) described that "*concourse* conditions are veritable hotbeds of turbulence, chaos, and disequilibrium" (p. 105).

Yet, the unit of measure within Q methodology is the person's point of view which can be measured on a scale (Brown, 2002). Watts (2011) emphasized this and that Q methodology does not simply study subjectivity. As Stephenson (1953b) described, Q methodology "as the *only* method capable of studying and comparing the viewpoints of everyday people mathematically, holistically, *objectively*, and 'with full scientific sanction, satisfying every rule and procedure of scientific method'" (p. 25). "The value of Q methodology is that it enables entry into subjective worlds and provides the tools for making those subjective meanings objective" (McKeown & Thomas, 2013, p. 5).

Advantages of Q Methodology. There are several advantages to using Q methodology. First, the subjectivity of perceptions is made observable by the use of a Q sort (Watts & Stenner,

2012). The Q sort and its analysis to find Q factors allows for the measurement of subjectivity (Delprato & Brown, 2002). Watts (2011), in fact, argued that Q methodology “is actually an objective science, but one that operates from the perspective of the *first* rather than the *third* person” (p. 38).

Second, this operant subjectivity has the advantage of maintaining the participants’ subjectivity without it being influenced by the researcher (Watts & Stenner, 2005) or by an external criterion from a measurement scale (Delprato & Brown, 2002). McKeown and Thomas (2013) explained that participants’ subjective viewpoints can be objectively analyzed as long as the researcher’s external frame of reference does not alter those viewpoints. This is accomplished by allowing participants to rank-order a series of statements (the Q set) based upon a condition of instruction that is used to guide participants in sorting these statements (McKeown & Thomas, 2013). Even though the researcher may develop the Q set, participants are still able to impose their own meanings upon the statements and determine their own significance for each statement during the sorting process (Watts & Stenner, 2012).

Third, within Q methodology meaning is “attributed a posteriori through interpretation rather than through a priori postulation” (Brown, 1980, p. 54). The participants themselves take the statements that are provided to them and unpack and find meaning among those statements based upon their individual viewpoints (Watts & Stenner, 2012). This meaning is often unique to individuals (Midgley & Morris, 2002) and Q methodology is able to maintain these unique perspectives that tend to be lost in the R methodological factor analysis process through the standardization of the data in order for factors to be directly compared (Watts & Stenner, 2012).

Finally, the result of Q methodology is to categorize operant subjectivity based upon participants' similar viewpoints with the use of factor analysis (Brown, 1980). Each of these factors potentially identifies a group of people who share a similar viewpoint about a topic (Watts & Stenner, 2012). Q methodology allows for a common unit of measurement: self-significance as determined by the participant (McKeown & Thomas, 2013).

Concourse Development

Stephenson (1986) referred to “concourse” as a universe of statements and that a concourse exists for every subject. With the infinite nature of the possible statements that characterize the concourse, the concourse must be sampled in the form of the Q set which allows the participant to work with a manageable representation of the concourse (McKeown & Thomas, 2013). As Watts and Stenner (2012) analogized, “concourse is to Q set what population is to person sample (or P set)” (p. 34). This Q set represents a sample of the greater conversations about a given topic.

As the first step of concourse development, a sample of the concourse about professional conversations was obtained from the literature (Brown, 1980; McKeown & Thomas, 2013; Watts & Stenner, 2012). This process involved obtaining statements from studies that included interview responses from teachers, paraprofessionals, and/or administrators that included possible barriers and supports for professional conversations in accordance with this study's theoretical frameworks and conceptual framework (See Figure 1). This approach is helpful in identifying the key themes of a given topic (Watts & Stenner, 2012) and may be used to supplement statements obtained directly from interview sources (McKeown & Thomas, 2013).

Upon approval from the University of North Florida's Institutional Review Board (See Appendix E) and after approval was gained from principals at targeted schools with an ASD and/or EBD program, the principal investigator sent teachers, paraprofessionals, and school administrators a concourse development questionnaire (See Appendix A) through purposive sampling in order to obtain statements that would be more relevant to professional conversations between teachers and paraprofessionals. McKeown and Thomas (2013) explained that when direct interviews may be impractical that samples of the concourse can be obtained through written narratives and is an equivalent source to in-person interviews. This approach by asking concourse development interviewees to provide written statements to two concourse development questions (See Appendix A) was used in this study out of consideration of time constraints for teachers, paraprofessionals, and their administrators.

Teachers and paraprofessionals from self-contained classrooms with children with ASD and EBD were targeted because the school district used in this study provides these types of classrooms with a teacher and at least two paraprofessionals and these classrooms tend to have students with significant behaviors that, in part, qualify them to be in a self-contained classroom. In addition to targeting teachers and paraprofessionals, the administrators from their schools were also included in the concourse development stage. The specific viewpoints of these individuals were gained while using their own language from their particular professional levels (McKeown & Thomas, 2013) as well as to aid in constructing a structured Q set with a sufficiently comprehensive and theoretically based sample (McKeown & Thomas, 2013). The study's two theoretical frameworks, motivating operations and Path-Goal Theory of Leadership, were used to aid in selecting statements for the Q set.

Each concourse development interviewee was given a two-page, two-item questionnaire in order to sample the concourse (Watts & Stenner, 2012): “What helps teachers and paraprofessionals to engage in professional conversations to support students’ efforts to meet their behavioral goals?” “What prevents teachers and paraprofessionals from engaging in professional conversations to support students’ efforts to meet their behavioral goals?” The concourse interviewees were given space to provide up to eight statements per concourse development question with each question on a separate page. These questions were created based upon the theoretical frameworks used in this study: motivating operations and Path-Goal Theory of Leadership.

Additionally, the concourse development questionnaires included demographic items that included school level, type of program, and positional title in order to ensure that the statements were obtained from elementary and secondary schools, ASD and EBD programs, and teachers and paraprofessionals and administrators. Concourse development interviewees were provided two envelopes in order to send their informed consent form and their concourse development questionnaire separately in order to allow for anonymity in responding.

Nine concourse development interviewees completed the concourse development questionnaires at which point saturation in the responses was reached (Davis et al., 2015; Paige & Morin, 2016) and coverage was obtained from elementary and secondary schools, ASD and EBD programs, and teachers and paraprofessionals and administrators. No additional concourse development questionnaires were accepted from potential concourse development interviewees. These additional concourse development questionnaires were destroyed.

The statements generated by the concourse development interviewees and obtained from the literature were used to create the Q set which samples the greater concourse of understanding about a topic (McKeown & Thomas, 2013). Watts and Stenner (2012) explained that the main aim of designing a Q set is to provide a good coverage in relation to the research question. Just as in R methodology when the sample of participants are selected to be representative of the population, the Q set should also represent a sample of the population of opinions, i.e. the concourse (Watts & Stenner, 2012).

A team of content/methodological experts, including the principal researcher and the dissertation committee methodologist, analyzed the concourse statements to create a structured and balanced sample (McKeown & Thomas, 2013; Watts & Stenner, 2012) of 40 statements (Watts & Stenner, 2012) that best matched the theoretical frameworks of this study: motivating operations and Path-Goal Theory of Leadership. Editing was used when necessary to avoid technical or complicated terminology, double-barreled items with two or more propositions, and the use of double negatives in order to avoid internal contradictions that may affect the participants' responding (Watts & Stenner, 2012), but care was taken to maintain the natural language of the statements as much as possible (McKeown & Thomas, 2013; Watt & Stenner, 2012).

These 40 statements formed the Q set, which in Q Methodology also acts as the study sample (McKeown & Thomas, 2013; Watts & Stenner, 2012). The Q set was balanced by ensuring that each statement that makes up the Q set was chosen to make its own contribution as a sample to the concourse while avoiding overlaps and gaps to the overall conversations about the topic in order to form a balanced Q set (Watts & Stenner, 2012). The Q set was structured

using the theoretical frameworks, Path-Goal Theory of Leadership and motivating operations, as categories to ensure that the statements fit equally and balanced within barriers or supports for professional conversations within the classroom (Watts & Stenner, 2012). A modified Fisher's (1960) balanced-block approach was used to ensure that statements represented leaders' initiating structure and psychological supports as well as the barriers that prevent collaboration. See the concept map found in Figure 1.

It is important to note that Q methodology studies the viewpoints of participants and not the statements of the concourse (Watts & Stenner, 2012). For this reason, it is vital that the researcher does not impose their own meanings upon the statements but instead allows the participants to impress their own meanings through the sorting process (Watts & Stenner, 2012).

Participants

The goal of Q methodology is to gain multiple perspectives; therefore, thoughtful inclusion of participants with known perspectives is a strategy for participant recruitment (Watts & Stenner, 2012). Within Q methodology, participants comprise the variables (Watt & Stenner, 2012), so careful consideration is needed for this selection just as in traditional methodologies (also known as R methodologies) where care is used when choosing variables. Brown (1980) reasoned that just as the Q set is formed based upon theoretical structuring, the P set (the participants) too is chosen based upon theory or along a relevant dimension rather than random selection. In fact, Watts and Stenner (2012) discussed choosing participants specifically for their viewpoint as a strategy for participant selection as long as those viewpoints are relevant to the research question.

The principal investigator works within the same school district as the participants in this study as the school district's behavior analyst. One of the principal investigator's main roles as the school district's behavior analyst is to provide behavioral support to teachers, paraprofessionals, and administrators at schools with ASD and EBD programs. The benefit of having a working relationship with so many teachers, paraprofessionals, and administrators is that the principal investigator can use purposive sampling to target specific teachers and paraprofessionals who have demonstrated professional conversations with each other and with the principal investigator as part of solving behavior problems within their classrooms. This method of participant selection is congruent with the expectations of Q methodology as a way to carefully select participants just as traditional methodologies would expect careful selection of variables (Brown 1980, Watts & Stenner, 2012). Due to the nature of this study, anonymity of the participants during Q sorting could not be assured, so therefore participant data was held confidential.

The goal in participant selection was to have less participants than statements in the Q set (Watts & Stenner, 2012), i.e. less than 40 participants. Additionally, coverage was obtained to include participants from elementary and secondary schools, ASD and EBD programs, and teachers and paraprofessionals and administrators. Once these conditions were met, the principal investigator concluded the study and no longer included additional participants.

The participants included 15 teachers, 14 paraprofessionals, and 8 administrators from five schools with self-contained classrooms for students with autism spectrum disorder or emotional and behavioral disorders (See Table 10). Again, teachers and paraprofessionals from self-contained classrooms with children with ASD and EBD were targeted because the school

district used in this study provides these types of classrooms with a teacher and at least two paraprofessionals, and these classrooms tend to have students with significant behaviors that, in part, qualify them to be in a self-contained classroom.

The participants were drawn from elementary and secondary school settings from a medium northeast Florida school district. Each participant was asked to provide demographic information as part of the Post Q sort Activity including gender, race/ethnicity/nationality, age, school level, type of program, positional title, education level, number of years of experience in education, number of years working in or with self-contained classrooms, and number of years working with current teacher/paraprofessionals. Demographic information was obtained using an open response approach instead of pre-defined categories (Watts & Stenner, 2012).

Thirty of the participants were female and seven were male. Three participants self-identified as African-American or Black, one as Pacific Islander, and thirty-three as White or Caucasian. Nine participants were in their 20s, eight were in their 30s, eleven were in their 40s, seven were in their 50s, and two were in their 60s. Twenty-three participants were from the elementary school level, and fourteen were from the high school level. Twenty-seven participants worked in schools with self-contained autism spectrum disorder classrooms and ten worked in schools with self-contained emotional and behavioral disorders classrooms. Ten participants had Master's degrees, seventeen had Bachelor's degrees, three had Associate's degrees, and seven had high school diplomas. Four participants had one or less years of experience in education, nine had between one and five years of experience, seven had between five and ten years of experience, ten had between twenty and ten years of experience, and seven had between thirty and twenty years of experience. Six participants had one or less years of

experience with self-contained classrooms, twelve had between one and five years of experience, fourteen had between five and ten years of experience, four had between twenty and ten years of experience, and one had between thirty and twenty years of experience. Of the 29 teachers and assistants, ten had one or less years of experience working with their current teacher or paraprofessionals, fourteen had between one and five years, four had between five and ten years, and one did not indicate how long they had worked with their current teacher or paraprofessionals. Of the eight administrators, one had one year of experience as an administrator, four had one to five years of experience, two had five to ten years of experience, and one had ten to twenty years of experience as an administrator.

Q Sort Procedures

The Q sort materials included forty 2 in. by 1.5 in. cards made of cardstock and printed with each of the 40 statements from the Q set (See Appendix B); a 22 in. by 14 in. distribution chart with 40 spots used to sort the Q set cards; and a data collection sheet that gave instructions for the pre-sorting activity, the condition of instruction for the Q sort, and a corresponding distribution chart numbered -4 to +4 along the top in which the extremes (-4 and +4) each also included the labels “Least like what impacts professional conversations about behaviors” and “Most like what impacts professional conversations about behaviors”, respectively. This blank distribution chart was used by the participants to write down each card’s randomly assigned number aligning with its sorted placement within the distribution chart (Watts & Stenner, 2012), and contained a second page with the post-sort activity to notate rationales for statement placements and demographic information (Watts & Stenner, 2012; McKeown & Thomas, 2013).

The Q sort distribution consisted of a forced-choice, standardized distribution table with columns that ranged from -4 to +4 that resembled an upside-down normal distribution curve (Watts & Stenner, 2012) with two -4s, three -3s, five -2s, six -1s, eight 0s, six +1s, five +2s, three +3s, and two +4s for a combined 40 statements to sort. A steeper distribution was chosen to assist the participants in making sorting decisions given that they are most likely not experts in professional conversations and collaboration (Watts & Stenner, 2012).

Q sorting occurred at each of the school sites in the morning before students arrived, in the afternoon once students had left, or during a planning period when the teacher or paraprofessionals were not responsible for the students. The Q sorting process took between 45 and 90 minutes. When possible, groups of 3 – 10 teachers and paraprofessionals met within one room and each participant was given a set of Q sort materials. Administrators completed their Q sorts separately, either individually or with other administrators at their school site, in order to prevent their presence from influencing the responses of the teachers and paraprofessionals as well as to better accommodate the administrators' schedules. The principal investigator was present during Q sorting to provide an opportunity to answer questions or explain Q sorting directions when needed.

Participants were first asked to rate themselves between 0 and 100 (Carlson & Kees, 2013; Treiblmaier & Filzmoser, 2009) on their level of professional conversations within their classrooms as a pre-sorting activity (See Appendix C) to be used later to aid in the interpreting process (Watts & Stenner, 2012). The participants were then tasked with sorting the statements in the Q set based upon their degree of agreement or disagreement with each statement (McKeown & Thomas, 2013). As McKeown and Thomas (2013) described, "meaning is

ascribed when Q sample items are sorted according to their degree of agreement or disagreement with the participant's point of view" (p. 3). Watts and Stenner (2012) noted the importance of the participant being able to sort these statements in response to the condition of instruction along a single, face-valid dimension. Additionally, Watts and Stenner (2012) advised that each pole use the same stem, which for this study are "Most like what impacts professional conversations about behaviors" at the +4 end and "Least like what impacts professional conversations about behaviors" at the -4 end.

Each type of participant (teacher, paraprofessional, administrator) sorted the 40 Q set statements according to the following condition of instruction designed for their position: What best reflects your perspective regarding what impacts your professional conversations with paraprofessionals in supporting students' efforts to meet their behavioral goals? What best reflects your perspective regarding what impacts your professional conversations with teachers in supporting students' efforts to meet their behavioral goals? What best reflects your perspective regarding what impacts professional conversations between teachers and paraprofessionals in supporting students' efforts to meet their behavioral goals? This condition of instruction is based upon the research question as well as the two theoretical frameworks: motivating operations and Path-Goal Theory of Leadership. The participants were read the condition of instruction as well as provided a written version to keep in front of them for the duration of the Q sorting (Watts & Stenner, 2012).

During the Q sorting process, the Q sort materials were first given to each participant to read over and familiarize themselves with the statements. While reading each statement, participants were encouraged to sort each statement into three piles: the positive pile with the statements

most like what impacts professional conversations about behaviors to the right, the negative pile with the statements least like what impacts professional conversations about behaviors to the left, and the neutral pile with statements that the participants felt may be neutral or could be placed on either side of the distribution were placed in the middle pile (Watts & Stenner, 2012; McKeown & Thomas, 2013). Next, participants were directed to select the two statements from the positive pile on the right that they view as most like what impacts professional conversations about behaviors and place them under the +4 distribution marker. Next they selected the statements that fit under the +3 distribution marker, and so on until finished with that pile. Then, they were asked to repeat this process with the statements from the negative pile into their corresponding columns on the left side of the distribution. Finally, the participant sorted the remaining middle pile statement cards into their corresponding columns in the distribution chart. Alternatively, they could also just sort the statements into the columns as they read each card and adjust the cards' placements as they sorted.

At the end of the sort, participants completed a Post Q sort activity (See Appendix C) that asked the participants to notate placement of the numbered statements using the corresponding distribution chart and to explain the reasoning behind their choice to sort statements at the -4 and +4 extremes (McKeown & Thomas, 2013), to explain any statements in the middle positions that may be important to the participant (Watts & Stenner, 2012), and if any statements were missing from the Q set that could better explain the issue and where those statements would be placed in the distribution (Watts & Stenner, 2012). Additionally, participants were asked to provide demographic information including gender, race/ethnicity/nationality, age, school level, type of program, positional title, education level, number of years of experience in education, number of

years working in or with self-contained classrooms, number of years working with current teacher/paraprofessionals (for teachers and paraprofessionals), and number of years as an administrator (for administrators). These rationales and demographics were recorded in addition to the placement of the statements using a data form that matched the distribution chart used for sorting (McKeown & Thomas, 2013). At this point once the participants sorted the Q set according to their self-reference, their subjectivity had been measured according to the condition of instruction given to them and meaning could be attributed to the Q set statements through data analysis (McKeown & Thomas, 2013).

Data Analysis

The data analysis process in Q methodology involves three procedures: correlation, factor analysis, and the computation of factor scores (McKeown & Thomas, 2013). As McKeown and Thomas (2013) explained:

The N Q sorts are correlated, one with another, producing a $N \times N$ correlation matrix, and this matrix in turn is subjected to factor analysis as a means of identifying the range and nature of truly independent viewpoints that are embedded in and are often difficult to distinguish in the vast contours of the concourse. (p. 3)

The PQMethod 2.11 analysis software was used to analyze the correlation matrix using principal component analysis and later varimax factor rotation.

Correlating Q sorts. Pearson product-moment correlations were calculated for each pair of Q sorts from the 37 participants using $r_{xy} = 1 - \Sigma d^2 / 2N\sigma^2$, where $N = 40$ statements, $\sigma^2 =$ is the variance of the Q sort distribution, and Σd^2 is the sum of squared differences in the statement scores between that pair's Q sorts (McKeown & Thomas, 2013). Due to having 37 Q sorts

completed by participants, this process created a 37 x 37 correlation matrix that represents each Q sort's relationship with every other Q sort (Watts & Stenner, 2012).

Factor Extraction. Factor analysis provides a statistical process through which participants may be grouped based upon how they respond in their Q sort (McKeown & Thomas, 2013). This process attempts to explain as much of the variance in this study as possible which results in factors that represent the portions of shared meaning that are present within the data (Watts & Stenner, 2012). The factor loadings that are produced function as correlation coefficients in that they “indicate the extent to which each Q sort is similar or dissimilar to the composite factor array... for that type. The standard error for a zero-order factor loading is $SE = 1/\sqrt{N}$, where N is the number of items in the Q sample” (McKeown & Thomas, 2013, p. 53).

The factor analysis process has an infinite number of acceptable solutions, but Watts and Stenner (2012) suggested finding a sound and workable solution that:

(a) is sensitive and responsive to your data set and thus to the feelings and viewpoints of your participants; (b) is satisfactory in relation to your own aims and purposes; (c) is methodologically and statistically, as well as theoretically, acceptable; and that (d) makes *good sense* of the data you have gathered, ultimately for the benefit of your reader/audience. (p. 96)

The centroid factor analysis method was chosen since it is a more permissive approach by allowing freedom in data exploration compared to the principal component analysis that only provides the one best solution (Watts & Stenner, 2012).

In order to determine how many factors to extract from the data for factor rotation, Watts and Stenner (2012) described several options. In the first, seven factors is the default number for

extraction in PQMethod 2.11 and was also determined by Brown (1980) to be a generally suitable number of factors. Second, Watts and Stenner (2012) suggested extracting one factor for every 6 to 8 participants in the study. Based upon the 37 participants for this study, that would indicate that four to six factors should be extracted. Third, the Kaiser-Guttman criterion can be used: the number of factors with eigenvalues of 1.00 or greater obtained from the factor extraction process. Fourth, factors that have two or more significantly loading Q sorts after extraction can be used. Fifth, Humphrey's rule "states that a factor is significant if the cross-product of its two highest loadings (ignoring the sign) exceeds twice the standard error" (Brown, 1980, p. 223). Sixth, a scree test can be used with the eigenvalues found after running a principal component analysis in which a change in the slope of a line graph of the eigenvalues and factors would indicate how many factors are needed.

In the third option, the statistical significance of the factors was determined by using the Kaiser-Guttman criterion. Eigenvalues can be used in which a factor's significance is estimated by the sum of its squared factor loadings (Watts & Stenner, 2012; McKeown & Thomas, 2013). Eigenvalues greater than 1.00 are considered significant and worth giving attention (Watts & Stenner, 2012; McKeown & Thomas, 2013). However, a disadvantage of this approach is that it could result in a solution with too many factors extracted (Watts & Stenner, 2012).

Therefore, caution must be used to avoid accepting statistically significant factors that are substantively less meaningful (Watts & Stenner, 2012; McKeown & Thomas, 2013). Similarly, factors that are found to not be statistically significant should not necessarily be ignored due possible situations in which one person's viewpoint may be the one that ultimately makes the decisions in a setting (Watts & Stenner, 2012; McKeown & Thomas, 2013), such as the

principal's viewpoint. These cautions constitute the debate of using theoretical versus statistical significance in identifying factors.

Factor Rotation. The purpose of factor rotation is to alter the position of the factors and their viewpoints in relation to the Q sorts in order to find an orientation that aligns individual or groups of Q sorts with identified factors (Watts & Stenner, 2012). Ideally, rotated factor loadings are maximized as much as possible with a set factor while also minimizing factor loadings with the other factors (Watts & Stenner, 2012). These groupings of Q sorts that fall around a factor allow an estimate that can be used to support a meaningful interpretation of that factor (Watts & Stenner, 2012).

There are two methods for factor rotation: theoretical and statistical. On the theoretical side, by-hand factor rotation is the traditional approach that allows for the factors to be rotated manually by the researcher who chooses where it is positioned (Watts & Stenner, 2012). Alternatively, varimax factor rotation is the most common statistical approach that automatically rotates the factors within the statistical program based upon finding the best solution by accounting for the maximum amount of variance (Watts & Stenner, 2012). Each has its advantages and disadvantages but the advantages of one may be considered the disadvantages of the other (Watts & Stenner, 2012). For example, by-hand factor rotation allows the option to find a viewpoint that may be substantively important to focus upon, while varimax only offers the one best orientation based upon the larger group yet is considered to be an objective solution to the by-hand approach. However, varimax may not necessarily provide the most meaningful results in the study if the researcher's intent was to explore unique perspectives that may have greater worth to the study than the perspectives of the larger group.

As an analogy, imagine that eight kindergarten and first grade students with autism spectrum disorder from a self-contained classroom are playing on the playground with students from four kindergarten general education classrooms. Each classroom teacher has taken up their assigned monitoring stations around the playground, two paraprofessionals from the self-contained classroom are prompting student to use appropriate play skills, a third paraprofessional who is an individual aide is monitoring a student known to have infrequent but intense behaviors, a parent volunteer is helping students fly a kite in the nearby field, and a sixth grade teacher is walking by on his way to the classroom after dropping off his class at the library.

All of a sudden, the student with the individual aide realizes that his preferred yellow ball was left in the classroom and begins to run off the playground. When this student's individual aide attempts to redirect her by using a visual support to remind her of what is coming up next on her schedule, the student attempts to bite her individual aide and escalates to continuous hitting, kicking, and scratching. The individual aide requests assistance and the other two assistants, who are trained in Safe Crisis Management, approach and assist the individual aide in using the Hook-Assist Transport to take the student back to the classroom where she can calm down as part of her crisis contingency plan.

By the end of the day, the principal has received the restraint report from the self-contained teacher but also three complaints from the parent, sixth grade teacher, and the kindergarten team leader about how the assistants were "manhandling" the student. The self-contained teacher and the three assistants are surprised by this reaction because they all had just recertified in how to de-escalate a behavioral episode as well as how to safely use restraints and

transports in a crisis situation. Additionally, they had all followed the Individualized Education Plan (IEP) approved crisis contingency plan for this student.

In this scenario, the adult observers are analogous to the individual Q sorts, whereas the situation that is observed represents the topic that is being sorted. The principal represents the process of factor rotation by analyzing individual or group perspectives as she seeks to better understand the event and make meaning of each person's viewpoint. Each adult's perception of the event might carry a particular weight given their understanding of students with ASD and Safe Crisis Management. Therefore, while a majority of perspectives may align with the five general education teachers, the self-contained teacher's information regarding whether the event was appropriately handled with the use of Safe Crisis Management might be more important to the principal. This analogy helps to illustrate the advantages of using a theoretical or by-hand factor rotation because of its usefulness in providing salience in understanding a specific viewpoint that may better explain a situation than the viewpoints of the majority.

Varimax rotation was chosen for this study in order to gain the one best orientation based upon the larger group since no specific Q sort was identified as a necessary reference variate or as holding a special interest in order to maximize its loading on one factor (Watts & Stenner, 2012; McKeown & Thomas, 2013). However, using varimax factor rotation could be argued to leave the process blind to the details from an individual or a group of a few participants that may be more valuable to explore than the majority viewpoints of the participants (Watts & Stenner, 2012).

Interpretation. A factor estimate is created by a weighted average of all the individual Q sorts that loaded significantly on that factor alone and provides an estimate of that factor's

viewpoint (Watts & Stenner, 2012). However, each factor may have different numbers of Q sorts aligned with them, so this presents a problem when comparing factors with each other. Z scores solve this issue by providing a standard score to be obtained for each factor and thus permitting each factor to be able to be compared with each other (Watts & Stenner, 2012).

From these z scores, a factor array can be created for each factor that displays a single Q sort constructed to show the viewpoint of a specific factor (Watts & Stenner, 2012). This factor array is arranged the same as the distribution chart used in the Q sort process with individual participants with values ranging from +4 to -4. With this arrangement, a factor becomes like a single viewpoint in the form of a Q sort, just as the participants were able to display their viewpoint with their own Q sorts. However, each of these factor arrays only approximates the viewpoints of the Q sorts that it represents (Watts & Stenner, 2012). As a result, some amount of error exists and each factor will intercorrelate to some extent (Watts & Stenner, 2012). If two factors are significantly correlated, then this may indicate that they are too much alike and may in fact be the same viewpoint (Watts & Stenner, 2012).

Watts & Stenner (2012) suggested using Watt's crib sheet system as a first step in interpreting the results from the factor arrays that appears "to devise a systematic and methodical approach to factor interpretation that might: (a) be applied consistently in the context of each and every factor; and (b) help the researcher to deliver genuinely holistic factor interpretations" (p. 150). First, a list is created with each statement from the Q set with its corresponding randomized number that was also used to notate the placement of statements in the distribution charts at the end of the initial Q sort process. Then a column is created for each factor to list the distribution scores from each factor array.

Using this table, a crib sheet for Factor 1 is drafted by reviewing each statement from the Q set and categorizing them into four categories: items ranked at +4 in a factor array, items ranked higher in the Factor 1 array than in other factor arrays, items ranked lower in the Factor 1 array than in other factor arrays, and items ranked at -4 in a factor array. A crib sheet is constructed for each of the other factors.

Next, attention must be turned to the statements that fall in the middle of the distribution in order to find statements that may be important due to their unique placement within a factor array (Watts & Stenner, 2012). For example, a statement that is only found near the middle of the distribution in Factor 2 may be a statement found at the extremes of the other factors. This statement becomes important for what it might mean for participants that fall within that factor, such as that they both agree and disagree with the statement (Watts & Stenner, 2012).

At this point, the logic of abduction is useful in making sense of the statements by “[proposing] the hypothesis on the basis of current evidence and see if it is sustained, or disproved, by the ranking of other items, by participant comment or even by any demographic information you have gathered” (Watts & Stenner, 2012, p. 155). Essentially, through abductive reasoning, sense is made out of what is currently known to find the simplest and most likely explanation of the statements in relation to their ranking and the additional information collected from the participants. It is necessary to adjust these explanations as each statement is examined in order to gain a view of the overall story of that factor (Watts & Stenner, 2012).

The demographics for participants can be formatted into a code for each participant (Watts & Stenner, 2012). The following demographics were obtained from each participant: positional title, gender, race/ethnicity/nationality, age, school level, type of program, education

level, number of years of experience in education, the number of years of experience with a self-contained classroom, and the number of years working with current teacher/paraprofessionals (for teachers and paraprofessionals) or the number of years of experience as an administrator (for administrators). Based upon this information, the following code could be constructed for a participant: TFW26EAB2-2-1. This code would mean the participant is a teacher who is female, white, 26 year old, at an elementary school with an ASD program, has a Bachelor's degree, 2 years experience in education, two years of experience with a self-contained classroom, and one year of working with her current paraprofessional(s). As another example, a code of AMA30HEM6-2-2 would indicate an administrator who is male, African-American, 30 years old, at a high school with an EBD program, has a Master's degree, six years of experience in education, two years of experience with self-contained classrooms, and two years experience as an administrator.

These participant codes were useful in reviewing the factor arrays with a second pass with the purpose being able to identify additional items that can help explain the overall story of each factor (Watts & Stenner, 2012). With this second pass, additional statements were added to each factor's crib sheet that were highly rated in the factor array or were potentially useful to include based upon middle placement within the factor array distributions, demographics, or other details that may have been reported by the participants after completing their Q sort (Watts & Stenner, 2012). With each additional statement included in the crib sheet, an explanation for inclusion was added.

In the final steps of interpretation for each factor, a name was given to describe the factor, a summary of relevant statistical and demographic information was provided, and a narrative was

written based upon the notes taken in the crib sheet to form a “seamless account of the factor’s viewpoint” (Watts & Stenner, 2012, p. 162). The qualitative data obtained from the participants at the end of their Q sorting process was also embedded within these factor descriptions.

Reliability and Validity

Reliability and validity have less value within Q methodology compared to the traditional R methodological approaches, and as a result Q methodologists discuss it less often (Watts & Stenner, 2012). An expectation of consistency through repeated administrations of a Q sort from the same participant under the same condition of instruction may not make much sense given the propensity of Q sorts to capture the transitive nature of thoughts at the moment that a Q sort occurs (Brown, 2002). Considering the many possible outcomes of a Q sort (such as the 1,600 possible combination of Q sorts for this study), there is a very low likelihood that a repeated Q sort by the same participant under the same condition of instruction would turn out with exactly the same configuration within the distribution chart. However, even so, this reliability would be more indicative of the reliability of the participant’s viewpoint than of the reliability of the method (Watts & Stenner, 2012). A reliability score could be determined for the factors that emerge for similar Q studies, but that misses the point of the primary purpose of Q methodology: “to identify a typology, not to test the typology’s proportional distribution within the larger population” (Valenta & Wigger, 1997, p. 501).

Similarly, validity in Q methodology has little value considering that there are no outside criteria for a participant’s own point of view (Brown, 1980). However, face validity is present in the context that participants sort statements in response to the condition of instruction along a single, face-valid dimension (Watts & Stenner, 2012). Even with its generally small participant

sizes, the purpose of Q methodology is not to generalize what is learned to the greater population, but to explore the viewpoints of participants in order to gain understanding of a given topic through a process that makes subjectivity operant without confounding them with the researcher's own point of view based upon a standardized measurement system such as that used within R methodologies (McKeown & Thomas, 2013).

Subjectivity Statement

The intent in Q methodology is to focus on the participants' perspectives by making their subjectivity operant. This process is meant to occur without *a priori* bias from the researcher affecting the results of the study. In order to provide a check for my own viewpoints from entering the interpretation process of this study, I decided to complete a Q sort to record my perspective under the condition of instruction (Burke, 2015). By making my own subjectivity operant, I was better able to understand how I would respond as a former self-contained teacher of five years in an ASD classroom who worked with two to three assistants in any given school year. This was important to know so that I could be clearer about my viewpoints in relation to other's viewpoints during the interpretation process in order to better separate my own viewpoints from the viewpoints of interest in the study. My own Q sort was not included in the analysis of this study since it is too unique of a perspective, and I was not interested in studying my own perspective but rather the perspectives of current teachers, paraprofessionals, and administrators. At the time of this study, I did not fit into any of those categories.

Chapter 3 Summary

This study used a Q methodological approach for the purpose of exploring the viewpoints of teachers, paraprofessionals, and administrators regarding the professional conversations about

student behaviors that occur within self-contained classrooms for students with autism spectrum disorder and/or emotional and behavioral disorders. This approach allows the subjectivity of their viewpoints to be made operant in order to conduct a factor analysis to identify relevant factors based upon the participants' Q sorts. First, the concourse of this topic was sampled by using targeted individuals from these settings to respond to a series of questions intended to elicit statements that could be categorized as barriers or supports for professional conversations about behaviors within the classroom. Path-Goal Theory of Leadership and motivating operations acted as the theoretical frameworks to assist in selecting these statements as the sample of the greater concourse for this topic.

Next, participants were given the materials to sort the 40 statements that made up the Q set, and their placement of the statements within the distribution chart was recorded based upon the following condition of instruction: What best reflects your perspective regarding what impacts professional conversations with your teacher/paraprofessional to address student behaviors within your classroom. Additionally, participants recorded demographics and their rationales for sorting statements at the extreme ends and the middle of the distribution chart.

Afterwards, the PQMethod 2.11 analysis software was used to analyze the correlation matrix using principal components analysis and varimax rotation. Four factors were extracted and found significant based upon a series of criteria and rationales. Factor array data obtained from the PQMethod 2.11 software and interview data gathered with post-sort questionnaires were used to assist with interpretation of the identified factors.

Chapter 4: Results

The purpose of this study was to explore the shared perspectives of teachers, paraprofessionals, and school administrators about professional conversations between teachers and paraprofessionals in self-contained classrooms for students with autism spectrum disorder (ASD) and/or emotional and behavioral disorders (EBD) in supporting students' efforts to meet their behavioral goals. Q methodology was chosen in order to take an exploratory approach to gain access to the viewpoints of teachers, paraprofessionals, and school administrators about these professional conversations. Using Q methodology allowed for the participants' viewpoints to be made operant and for these viewpoints to be understood holistically (Watts & Stenner, 2012). The research question for this study was "What are the shared perspectives of teachers, paraprofessionals, and administrators regarding what impacts professional conversations between teachers and paraprofessionals in supporting students' efforts to meet their behavioral goals?"

Thirty-seven participants, including teachers, paraprofessionals, and administrators, completed the 40-item Q sort of statements about barriers or supports for professional conversations between teachers and paraprofessionals in self-contained classrooms for students with ASD and/or EBD in supporting students' efforts to meet their behavioral goals. These teachers and paraprofessionals from self-contained classrooms were targeted because the school district used in this study provides these types of classrooms with a teacher and at least two paraprofessionals, and these classrooms tend to have students with significant behaviors that, in part, qualify them to be in a self-contained classroom. These participants included 15 teachers, 14 paraprofessionals, and 8 administrators from five schools. Of these 37 participants, 23

participants were from the elementary school level and 14 were from the high school level.

Furthermore, 27 of the 37 participants worked in schools with self-contained ASD classrooms and 10 worked in schools with self-contained EBD classrooms.

Chapter 4 provides the results of this study. First, the results of the concourse development phase of this study are presented. Next, an analysis of the data obtained from the 37 Q sorts completed by the participants is presented, which includes details about the correlation matrix, factor extraction, factor rotation, correlations between factors scores, and factor characteristics. Then, the factor interpretation narratives are provided for each of the four factors found in this study.

Concourse Development Phase

With any given topic, there exists an infinite number of possible statements that make up what is called the concourse in Q methodology. In order to measure the subjectivity of the participants' viewpoints about professional conversations between teachers and paraprofessionals in self-contained classrooms for students with ASD and/or EBD in supporting students' efforts to meet their behavioral, this greater concourse must be sampled in a form that allows the participants to work with a manageable representation called the Q set (McKeown & Thomas, 2013). As the first step of concourse development, a sample of the concourse about professional conversations was obtained from the literature (Brown, 1980; McKeown & Thomas, 2013; Watts & Stenner, 2012). The rest of the concourse in this study was developed from the nine concourse development interviewees that were comprised of teachers, paraprofessionals, and administrators from schools with ASD or EBD self-contained classrooms.

The concourse development questionnaires (See Appendix A) asked the interviewees to provide: “What helps teachers and paraprofessionals to engage in professional conversations to support students’ efforts to meet their behavioral goals?”; “What prevents teachers and paraprofessionals from engaging in professional conversations to support students’ efforts to meet their behavioral goals?”; demographic information for school level, type or program, and positional title; and space for additional comments. Nine concourse development questionnaires were received, but only eight participants completed the demographic information. The demographic information indicated that questionnaires were received from six elementary participants, one junior high participant, and one high school participant. Six participants identified themselves from autism spectrum disorder (ASD) programs, one participant from an emotional and behavioral disorders (EBD) program, and one participant from both. Two participants identified as teachers, three as paraprofessionals, and three as administrators. The one participant who did not provide demographic information provided details in the questionnaire that would be indicative of an EBD program.

The last concourse development questionnaire packet was accepted on the last day of school before the targeted school district went on its Thanksgiving Break in which the schools closed for the whole week of Thanksgiving. This day was selected as a natural ending point for receiving questionnaire packets for the concourse development phase of the study due to this extended break in school. Additionally, the demographic information in the concourse development questionnaire indicated that data was obtained from at least one member of each targeted group (teacher, paraprofessional, administrator, elementary, junior high, high school, ASD, and EBD).

First, the statements from the questionnaires were typed into a spreadsheet program with their statement category (i.e. support, barrier, comment) as identified by each participant. This process resulted in 76 entries with 42 supports, 32 barriers, and 2 comments.

Next, the principal investigator broke apart more complex and/or multi-sentence entries into single statements. When a statement was broken apart, it was copied into a new cell below the original statement, changed to a different font color, and strikethrough lines were used to mark though content that would be ignored for that version of the original statement. The strikethrough lines helped to maintain the context from the original statement. This process resulted in 108 statements. The same process was conducted with 16 relevant quotes from the literature and brought the total list to 136 statements. Then, the principal investigator identified these 136 statements as either a support or barrier. This process resulted in 88 supports and 48 barriers.

Next, the statements were sorted so that all support statements and all barrier statements were grouped together. Then, each statement was given a number from 1 to 136. Afterwards, each statement was reviewed and categorized as belonging to one of the two types of leader behaviors from Path-Goal Theory of Leadership (House, 1971): initiating structure and consideration. The following heuristics were used in sorting statements into each of the two categories. Initiating structure involves groups, the whole classroom, external processes, a practice, rules/policies, and/or has an extrinsic value. Consideration, on the other hand, involves individuals, internal processes, personal matters, and/or has an intrinsic value. This process resulted in 47 initiating structure supports, 39 consideration supports, 23 initiating structure barriers, and 27 consideration barriers.

Next, statements from each category (initiating structure supports, consideration supports, initiating structure barriers, and consideration barriers) were reviewed separately from the other categories, and each set of statements was narrowed down to a sample of 10 statements for each category. A Fisher's (1960) balanced-block approach was used to ensure that statements represented initiating structures and considerations for both supports and barriers for professional conversations. This process involved eliminating duplicate responses, eliminating statements that did not answer the condition of instruction that would be used in the Q sorting phase of the study, referring back to topics found in the literature review, and making value judgments based upon which ten statements were the most important to include in the Q set. When the statements for each category were narrowed down to about 15 or less statements, codes were created for each statement to label its main topic. The guiding focus was on creating a Q set that was balanced by ensuring that each statement that makes up the Q set was chosen to make its own contribution as a sample to the greater conversations about professional conversations between teachers and paraprofessionals while avoiding overlaps and gaps to the overall conversations about the topic (Watts & Stenner, 2012).

Once ten statements were chosen for each category (initiating structure supports, consideration supports, initiating structure barriers, and consideration barriers), each statement was reviewed and edited to be able to answer the condition of instruction for each of the targeted participants: "What best reflects your perspective regarding what impacts your professional conversations with paraprofessionals in supporting students' efforts to meet their behavioral goals?" (for teachers); "What best reflects your perspective regarding what impacts your professional conversations with teachers in supporting students' efforts to meet their behavioral

goals?” (for paraprofessionals); “What best reflects your perspective regarding what impacts professional conversations between teachers and paraprofessionals in supporting students’ efforts to meet their behavioral goals?” (for administrators). This editing was used when necessary to avoid technical or complicated terminology, double-barreled items with two or more propositions, and the use of double negatives in order to avoid internal contradictions that may affect the participants’ responding (Watts & Stenner, 2012), but care was taken to maintain the natural language of the statements as much as possible (McKoeun & Thomas, 2013; Watt & Stenner, 2012). Finally, each of the 40 Q set statements were given a randomly generated number from 1 to 40 (See Appendix B).

Q Sort Phase

In the Q sort phase of this study, participants were given the 40 statements that made up the Q set that was developed in the concourse development phase. They then sorted these statements within an inverted distribution table (See Appendix C) based upon the following condition of instruction designed for their position: “What best reflects your perspective regarding what impacts your professional conversations with paraprofessionals in supporting students’ efforts to meet their behavioral goals?” (for teachers), “What best reflects your perspective regarding what impacts your professional conversations with teachers in supporting students’ efforts to meet their behavioral goals?” (for paraprofessionals), and “What best reflects your perspective regarding what impacts professional conversations between teachers and paraprofessionals in supporting students’ efforts to meet their behavioral goals?” (for administrators). Each participant recorded the placement of the statements within a similar distribution chart on the data sheet (See Appendix C). Additionally, participants recorded

demographics, their rationales for sorting statements at the extreme ends and the middle of the distribution chart, if there were any statements that they think were missing, and if any statements were confusing.

Correlation matrix. At the conclusion of this study, 37 participants had completed the Q sort. After entering the recorded placement numbers from each participant's inverted distribution table on their data sheet into the PQMethod 2.11 software, the first step in analyzing this data was to obtain a correlation matrix (See Table 1). This 37 x 37 correlation matrix represents the measure of the relationship of each Q sort with every other Q sort. A correlation coefficient of +1 would indicate a 100% positive correlation between two Q sorts, a -1 would indicate a 100% negative correlation between two Q sorts, and a 0 would indicate a 0% correlation between two Q sorts. The greatest positive correlation was between Q sort 10 and Q sort 19 (0.71) indicating a strong positive relationship, the greatest negative correlation was between Q sort 9 and Q sort 36 (-0.34) indicating a weak to moderate negative relationship, and there were three pairs of Q sorts with 0 correlation: Q sort 1 and Q sort 35, Q sort 6 and Q sort 36, and Q sort 7 and Q sort 36. As a whole, the correlation matrix represents 100% of the meaning and variability found within this study, which is known as the study variance (Watts & Stenner, 2012).

Factor extraction. Using this correlation matrix, the PQMethod 2.11 software conducted a principal component analysis (PCA) that was used to account for as much of the study variance as possible in order to explain the relationships between the Q sorts in a similar grouping called a factor (Watts & Stenner, 2012). Principal component analysis was used instead of centroid factor analysis because no one Q sort stood out as a unique and important

viewpoint to focus upon. Instead, principal component analysis was used to find “a single, mathematically best solution” (Watts & Stenner, 2012, p. 99). This resulted in an unrotated factor matrix with eight factors listed in decreasing order of size with eigenvalues and explained variances listed for each factor (See Table 2).

In this unrotated factor matrix, each column represents a factor and lists the unrotated factor loadings in the form of a correlation coefficient for each Q sort. This factor loading represents the extent to which each Q sort matches that factor. For example, Q sort 20 had a factor loading of 0.84 on Factor 1, which accounted for 71% (0.84×0.84) of its variance as explained by Factor 1. Whereas, Q sort 35 had a factor loading of 0.11 on Factor 1, which accounted for 1% (0.11×0.11) of its variance as explained by Factor 1.

At this point, a determination for how many factors to be extracted was needed. Brown (1980) suggested that seven factors was a generally suitable number of factors to extract. Alternatively, Watts and Stenner (2012), suggested extracting one factor for every 6 to 8 participants in the study, which in this case would be between 4 ($37 \div 8 = 4.63$) and 6 ($37 \div 6 = 6.17$) factors. Third, the Kaiser-Guttman criterion can be used in which the number of factors is determined by factors with eigenvalues of 1.00 or greater (Watts & Stenner, 2012). For the eight factors that PQMethod 2.11 provided by default in the unrotated factor matrix, the eigenvalues (EV) for Factor 1 was 11.13 (30% of explained variance), Factor 2 was 3.08 (8% of explained variance), Factor 3 was 2.70 (7% of explained variance), Factor 4 was 2.24 (6% of explained variance), Factor 5 was 1.92 (5% of explained variance), Factor 6 was 1.77 (5% of explained variance), Factor 7 was 1.62 (4% of explained variance), and Factor 8 was 1.46 (4% of explained

variance). Therefore, all eight of these factors could be considered for extraction since their eigenvalues were all greater than 1.00.

A fourth option was to extract the number of factors that have two or more significantly loading Q sorts after extraction (Watts & Stenner, 2012). In this process, the factor loadings of each of the Q sorts in the unrotated factor matrix provided by PQMethod 2.11 are compared to the value of a significant factor loading at the 0.01 level. Brown (1980) explained that for a factor loading to be significant at the 0.01 level, it must exceed $2.58(SE)$ or $2.58 * (1 \div \sqrt{\text{number of items in the Q set}})$ or $2.58 (1 \div \sqrt{40}) = \pm 0.41$. Factor 1 had 28 significant factor loadings, Factor 2 had five, Factor 3 had six, Factor 4 had three, Factor 5 had three, Factor 6 had two, Factor 7 had one, and Factor 8 had two. Since Factor 7 had only one significant loading and therefore did not meet this criterion, it would be appropriate to extract six factors.

Fifth, Humphrey's rule "states that a factor is significant if the cross-product of its two highest loadings (ignoring the sign) exceeds twice the standard error" (Brown, 1980, p. 223; Watts & Stenner, 2012). The standard error ($1 \div \sqrt{\text{number of items in the Q set}}$, $1 \div \sqrt{40}$) equals 0.16; therefore, $2SE = 0.32$. The cross-products of the two highest loadings in the unrotated factor matrix for Factor 1 was 0.64, Factor 2 was 0.38, Factor 3 was 0.32, Factor 4 was 0.19, Factor 5 was 0.31, Factor 6 was 0.35, Factor 7 was 0.20, and Factor 8 was 0.23 (See Table 3). Of the eight factors that PQMethod 2.11 provided by default in the unrotated factor matrix, four satisfy Humphrey's rule: Factor 1, Factor 2, Factor 3, and Factor 6. This would indicate that it might be appropriate to extract four factors.

As a sixth option for determining how many factors to extract, a scree test can be used by graphing the eigenvalues of each of the eight factors that PQMethod 2.11 provided by default in

the unrotated factor matrix (Watts & Stenner, 2012). The point at which the slope changes would indicate how many factors to extract. Given that the eigenvalue of Factor 1 was 11.13 and the eigenvalues for Factors 2 through 8 gradually decreased from 3.08 to 1.46, the slope of the line representing the change in the values of the eigenvalues for all eight factors dramatically changes after Factor 2 in which the slope of this line becomes noticeably shallower. This scree test would indicate that it would be appropriate to extract two factors.

At this point, rationales can be provided to extract two factors according to the scree test, four factors according to Humphrey's rule, between 4 and 6 factors based upon Watts and Stenner's (2012) one factor per every six to eight participants, six factors based upon the number of significant factor loadings in the unrotated factor matrix, seven based upon Brown's (1980) "magic number 7" heuristic (p. 223), and at least eight factors based upon the Kaiser-Guttman criterion using eigenvalues. Given this range of variability among these six options for making a decision on how many factors to extract, four factors were chosen to be extracted as guided by Humphrey's rule (See Table 4).

Factor rotation. The purpose of factor rotation is to position each factor so that it approximates the viewpoint of a group of participants as closely as possible (Watts & Stenner, 2012). There are two methods for factor rotation: theoretical and statistical. On the theoretical side, by-hand factor rotation is the traditional approach that allows for the factors to be rotated manually by the researcher who chooses where it is positioned (Watts & Stenner, 2012). An advantage of using by-hand factor rotation is that it allows for the option to find a viewpoint that may be substantively important to focus upon. Alternatively, varimax factor rotation is the most common statistical approach that automatically rotates the factors within the statistical program

based upon finding the best solution by accounting for the maximum amount of variance (Watts & Stenner, 2012). Varimax rotation was chosen over by-hand rotation since no one Q sort stood out as a unique and important viewpoint to focus upon.

Ideally, rotated factor loadings are maximized as much as possible with a set factor while also minimizing factor loadings with the other factors (Watts & Stenner, 2012). These groupings of Q sorts that fall around a factor allow an estimate that can be used to support a meaningful interpretation of that factor (Watts & Stenner, 2012). Therefore, caution must be used to avoid accepting statistically significant factors that are substantively less meaningful (Watts & Stenner, 2012; McKeown & Thomas, 2013). Choosing four as the number of factors to extract, and subsequently to perform the factor rotation, helped to avoid this issue of having too many factors that may have been statistically significant but not as substantively meaningful in regards to professional conversations between teachers and paraprofessionals in self-contained classrooms for students with ASD and/or EBD in supporting students' efforts to meet their behavioral goals.

However, as an added precaution to ensure that four factors was the best choice for the number of factors to extract, varimax rotations were also conducted with three and five factor solutions in order to compare with the four-factor solution (See Table 5, Table 6, and Table 7).

Within the four factor solution using varimax factor rotation, four Q sorts (8, 24, 26, 36) were found with non-significant factor loadings (i.e. below a factor loading of 0.41) across each of the four factors and therefore do not exemplify any of these four factors. In comparison, a three-factor solution had seven Q sorts (5, 8, 22, 27, 28, 32, 36) with non-significant factor loadings across each of the three factors, and a five factor solution had two Q sorts (8, 26) with

non-significant factor loadings across each of the five factors. A five-factor solution therefore had the least number of non-significant factor loadings across each of its rotated factors.

Within the four-factor solution using varimax factor rotation, 11 Q sorts (4, 6, 9, 12, 14, 15, 16, 17, 20, 31, and 34) were found to be confounded due to each of those Q sorts having a significant factor loading (i.e. above a factor loading of 0.41) within two factors. Typically, confounded Q sorts are not used when constructing factor estimates (Watts & Stenner, 2012). In comparison, a three-factor solution also had 11 confounded Q sorts (2, 3, 6, 9, 12, 15, 20, 21, 30, 33, 34), and the five-factor solution had nine confounded Q sorts (3, 6, 9, 11, 12, 20, 30, 31, 34). Therefore, a five-factor solution had fewer confounded Q sorts.

However, since the value of a significant factor loading at the 0.01 level for this study is 0.41 or greater, $2.58 \times (1 \div \sqrt{\text{number of items in the Q set}})$ or $2.58 (1 \div \sqrt{40}) = \pm 0.41$, Q sorts around this value are not so close to either pole (-1 or +1) and therefore may not represent the factor estimate as would a Q sort with a greater factor loading. Therefore, identifying factor loadings greater than 0.60 can be used to identify factor loadings that better approximate the factor estimate (Watts & Stenner, 2012). However, this approach also limits the number of Q sorts used with the factor estimate, which would reduce the factor reliabilities and increase the amount of error the factor estimates contain (Watts & Stenner, 2012). Brown (1980) concluded that at least two Q sorts are needed within a factor to ensure for sufficient factor reliability. This is further evidence to support that a four factor solution is warranted given that the three and five factor solutions each have a factor with only one Q sort with a factor loading greater than 0.60 (See Table 5 and Table 7).

Correlations between factor scores. Correlations between factors indicates the level of relationship between one factor array with another and ranges from -1.0 to +1.0 (Watts & Stenner, 2012). According to the PQMethod 2.11 software, given a four-factor solution, Factors 1 and 4 have a moderate positive relationship with a correlation coefficient of 0.53 and therefore could be alternative manifestations of the same factor (See Table 8). In contrast, Factors 2 and 3 have a weak positive relationship with a correlation coefficient of 0.07 indicating little relationship between each other.

Factor characteristics. According to the PQMethod 2.11 software, the eigenvalue of Factor 1 was 5.6, Factor 2 was 4.4, Factor 3 was 4.0, and Factor 4 was 6.4. Factor 1 explained 14% of the variance, Factor 2 explained 11%, Factor 3 explained 10%, and Factor 4 explained 16%. Additionally, in Factor 1, four Q sorts had factor loadings greater than 0.41 and three of those Q sorts had factor loadings greater than 0.60. In Factor 2, four Q sorts had factor loadings greater than 0.41 and three of those Q sorts had factor loadings greater than 0.60. In Factor 3, five Q sorts had factor loadings greater than 0.41 and three of those Q sorts had factor loadings greater than 0.60. In Factor 4, nine Q sorts had factor loadings greater than 0.41 and three of those Q sorts had factor loadings greater than 0.60. Eleven of the Q sorts were confounded across two factors (4, 6, 9, 12, 14, 15, 16, 17, 20, 31, and 34), and four Q sorts (8, 24, 26, 36) were found with non-significant factor loadings (i.e. below a factor loading of 0.41) across each of the four factors and therefore do not comprise any of these four factors. Additionally, there were no significant negative factor loadings (i.e. a factor loading below -0.41) for any of the Q sorts in any of the four factors. The highest negative factor loading was -0.33.

According to the Factor Characteristics table provided by the PQMethod 2.11 software (See Table 9), Factor 1 had seven defining variables, Factor 2 had four defining variables, Factor 3 had four defining variables, and Factor 4 had 13 defining variables. These defining variables are determined based on:

- 1) Whether the factor explains more than half of the common variance ($a^2 > h^2/2$; where “a” is the factor loading and h^2 is the communality of a sort that is computed as the sum of the squared factor loadings for that sort, Σa^2), and
- 2) If the loading is significant at the $p < 0.05$ level [$a > 1.96 / \sqrt{(\text{number of items in the Q set})}$]; where “a” is the factor loading](Schmolck, 2014, See Algorithms and formulas).

The composite reliability was 0.97 for Factor 1, 0.94 for Factor 2, 0.94 for Factor 3, and 0.98 for Factor 4 (See Table 9). These values represent the combined test-retest reliability coefficients of all of the Q sorts for all participants in a given factor (Brown, 1980). McKeown and Thomas (2013, p. 61) provided the formula as $r_{xx} = [(0.80)p]/[1 + (p - 1).080]$, where r_{xx} is the factor’s reliability, p is the number of persons defining a factor (See Table 9) and 0.80 is the estimated reliability coefficient for each person as determined by Brown (1980). Given the composite reliability values for each factor as listed above (See Table 9), the factor arrays produced by the PQMethod 2.11 software therefore distinguish with high consistency between how the four factors represent the viewpoints of teachers, paraprofessionals and administrators about professional conversations between teachers and paraprofessionals in self-contained classrooms for students with autism spectrum disorder (ASD) and/or emotional and behavioral disorders (EBD) in supporting students’ efforts to meet their behavioral goals. Additionally, the standard error of factor scores are 0.19 for Factor 1, 0.24 for Factor 2, 0.24 for Factor 3, and 0.14

for Factor 4. Brown (1980) and McKeown and Thomas (2013) provided the formula as $SE_{fs} = s_x \sqrt{1 - r_{xx}}$, where SE_{fs} is the standard error of the factor scores, s_x is the standard deviation of each forced Q sort distribution, and r_{xx} is the factor's reliability. As can be noticed (See Table 9), as the composite reliability increases for each factor, the standard error of the factor score decreases, and vice versa.

Another detail to discuss about the four factors is the single consensus statement that was found by PQMethod 2.11. Consensus statements are items that are ranked in much of the same way across each of the factors (Watts & Stenner, 2012). In this study, that single consensus statement is "(20) Movement toward candid conversations." Factor 1 ranked it at -2, Factor 2 was -2, Factor 3 was 0, and Factor 4 was -2.

Factor Interpretation

It is necessary to emphasize the importance of taking a holistic approach to the factor interpretation process involved in Q methodology (c.f. Watts & Stenner, 2012; c.f. Delprato & Brown, 2002). The heart of this process belongs among the viewpoints of the participants in this study and their Q sorts that have made their subjective viewpoints operant and observable. This process begins with the factor arrays that were developed by the PQMethod 2.11 software (See Table 11). These factor arrays were developed by first creating factor estimates that consisted of weighted averages of all of the Q sorts that loaded significantly onto a given factor (Watts & Stenner, 2012). Then, these weighted averages were converted into z scores as a means for allowing the factor estimates to be comparable to each other (Watts & Stenner, 2012). Finally, the z scores were converted into a range of whole numbers from -4 to +4 to match the range on the inverted distribution chart used in this study during the Q sorting phase. The resulting factor

arrays can each be viewed as Q sorts themselves representing a single factor and the combined viewpoints of the participants that load on that factor (Watts & Stenner, 2012). See Figure 2, Figure 3, Figure 4, and Figure 5 for the Q sort representations of the factor arrays for Factor 1, Factor 2, Factor 3, and Factor 4, respectively.

The factor interpretation process in this study used the crib sheet approach outlined by Watts and Stenner (2012) in which a list was made for each factor based upon their respective factor array and the statements that ranked as +4, that ranked higher in that factor array than in any other factor array, that ranked lower in that factor array than in any other factor array, that ranked as -4, and that ranked as 0 (See Appendix D). Then the principal investigator read these statements in their respective groups in the crib sheet and, through abduction, began making notes about interesting similarities and relationships among the listed statements. Next, a second pass was made over the remaining statements in that factor array, and additional statements were placed on the crib sheet that fit within the abductive reasoning in the previous step, and an explanation for inclusion was provided with these additional statements. Data from the post-sort interview activity of participants who significantly loaded on a factor was also included as a check on the principal investigator's abduction. Then, demographic information was added for the participants who significantly loaded into the factor, and additional abduction was used to find the patterns that made these participants similar. Altogether, each crib sheet developed for each factor was a holistic representation based upon both the factor arrays as well as the participants' direct input in the post-sort questionnaire data. The last step of the interpretation process was to give each factor a name based upon each narrative developed.

The following four factor interpretation narratives each start with a title, statistical data, and participant demographics. Then a narrative itself begins with a description of the participants who align with that factor. A short synopsis concludes the narrative before moving onto the next factor narrative.

Factor 1: Natural Communicators. Factor 1 has an eigenvalue of 5.60 and explains 14% of the study variance. Ten of 37 participants comprised this factor by having a significant factor loading above 0.41, $p < 0.01$. These 10 participants included six paraprofessionals and four teachers. No administrators were significantly associated with this factor. There were nine females and one male. Ages ranged from 26 to 55 years. Six participants were from elementary schools and four were from high schools. All participants were from self-contained autism spectrum disorder (ASD) classrooms. One participant had a Master's degree, four had a Bachelor's, one had an Associate's, and four had high school diplomas. Experience in education ranged between 3 and 20 years. Experience with self-contained classrooms ranged between 1 and 20 years, and participants had been working with current classroom staff between 1 and 9 years.

Participants who comprised Factor 1 emphasized the importance of conferencing after student escalations in behavior in order to discuss what helped and what could have been done differently (9: +4) as well as discussing procedures of how to diffuse escalated situations in student behavior (17: +4). This group of participants seemed to see the value of professional conversations as a tool for preventing escalations in student behaviors that may lead to crisis situations and the use of restraint and/or seclusion. As one participant stated, "[9) conferencing after student escalations in behavior and (17) discussing procedures to diffuse situations] go hand

in hand.” Another explained, “I believe [(17) discussing procedures to diffuse situations] is one of the most important aspects of my job. It keeps me motivated, present, and as a team, we have a united purpose when we utilize this; we are more effective”. Another participant stated, “Discussing specific situations after they have occurred is key to breaking down/understanding student behaviors.”

Another area of importance expressed by this viewpoint is that if problems arise between teachers and paraprofessionals, then they need to speak to each other instead of talking to others who are not involved (1: +3). There also seems to be no room for talking negatively about another adult in the classroom (14: +3). These statements encompass a theme of settling conflicts with the individuals involved and keeping unnecessary others out of these conflicts. Similarly, including personal thoughts or pre-conceived notions instead of focusing on fact (3: 0), as one participant said, “should be considered, because it’s a natural thing, but as a professional, it should be set aside.” However, it seems that these participants are not prevented from voicing their opinions in meaningful ways (33: -3). Additionally, these participants do not seem to avoid conversations they find uncomfortable (20: -2) or worry about speaking candidly (20: -2). As one participant stated, “If you dislike someone’s personality, you still can respect them.” Therefore, less weight is placed upon a true dislike of personalities (5: 0). Instead, mutual respect of everyone’s contribution (31: +1) has value, especially considering that being understaffed is an issue (12: +3) and as one participant said, “Having an adequate staff is extremely important in order to provide care and academics for the students.” In fact, everyone in the classroom needs to possess a sincere desire to help students to succeed (23: +2) and if their

position is just filling a job, it will show through and influence the climate of the classroom (7: +1). Some amount of unity is needed (15: +2).

Additionally, paraprofessionals seem to need to be trusted to know more about students' conditions and individualized education plans (IEPs) so that they can best participate in helping to meet behavioral goals (30: +3). Yet, one participant explained that “[b]eing included in [IEP] meetings... is not as important to paraprofessionals as long as information is provided to us.” For example, it is important to start the school year with a sharing of students' important information (26: +2).

Something that is not valued as much is using a list or outline to keep conversations on target (10: -4) or the principal as the individual with the greatest positional authority who has an obligation to take the initiative in creating the conditions for productive professional conversations (8: -4). As one participant explained, “I think these tactics are unnecessary and an example of over-managing employees.” Another participant said that these “should inherently be a ‘non-issue’”. It seems to be another level of problems irrelevant to behavior conversations.” These responses seem to hint that a level of professionalism is assumed among these participants.

However, there is an authority figure in the classroom, the teacher who sets the tone for how assistants are viewed by the students (24: 0), but it is not necessary for the teacher to hold that authority over the other adults in the classroom. As a participant stated, “I feel communication has the most impact. Communication sets the tone for the positives and negatives of how the kids respond and with how they respect you.” Communication has to be a priority (30: +2). The participants that align with this factor seem more concerned with

developing relationships between the teachers and paraprofessionals that are viewed by all as a team (19: +2).

As such, not having a clear understanding of the teachers' or paraprofessionals' roles and responsibilities (13: 0), disagreements on goals or methods to reach goals (28: 0), and even poor collaborative skills (40: 0) may not play as large of a part in these professional conversations. A lack of confidence on the part of a teacher or paraprofessional (38: -2), too, may not play much of a role in professional conversations.

It may largely be taken for granted that opportunities are provided to share expectations that team members have for each other (34: -3) or that there is open communication among everyone within the classroom (21: -1). These professional conversations about behaviors seem to be occurring throughout the day because the hours paraprofessionals are expected to work (arriving 15 minutes before students arrive and leaving 15 minutes after students are dismissed) do not tend to hinder their time to be a part of conversations (6: -3). Therefore, it may not be important to these individuals to have a scheduled time for the teacher and paraprofessionals to meet to discuss student goals for the week (37: -1), having quality planning time where all classroom paraprofessionals and the teacher are able to converse without student presence (35: -2), or for paraprofessionals to be a part of professional learning community meetings, data meetings, trainings for teachers, etc. (2: -3). These more formal training opportunities may not even be as needed to utilize paraprofessionals to better help teachers in working toward meeting student goals (39: -2) because the participants that align with this group have between three and 20 years of experience.

Overall, these participants are from self-contained ASD classrooms and are made up primarily of paraprofessionals with some teachers and no administrators. There are no participants who are brand new to education, and only one teacher is new to self-contained classrooms. This is a viewpoint that exists at both elementary and high school levels and seems to focus on the need to use conversations to ensure that proactive strategies are in place to avoid escalations in behaviors and to prevent a crisis situation that would need the use of restraint and/or seclusion. These participants seem to find ways to embed communication throughout the school day, do not get caught up in disagreements or talking negatively about other, and do not really require an authority figure to manage them. These conversations seem to not be well received if mandated or overly structured. These participants are Natural Communicators.

Factor 2: Guided Communicators. Factor 2 has an eigenvalue of 4.40 and explains 11% of the study variance. Ten of 37 participants comprised this factor by having a significant factor loading above 0.41, $p < 0.01$. These 10 participants included five paraprofessionals, three teachers, and two administrators. There were eight females and two males. Nine participants were White and one was African-American. Ages ranged from 28 to 58 years. Seven participants were from elementary schools and three were from high schools. Six participants were from self-contained EBD classrooms and four were from self-contained ASD classrooms. Two participants had a Master's degree, four had a Bachelor's, three had an Associate's, and one had a high school diploma. Experience in education ranged between 1 and 14 years. Experience with self-contained classrooms ranged between 1 and 10 years, and participants had been working with current classroom staff between 1 and 4 years.

Participants who comprised Factor 2 valued most having a scheduled time for teachers and paraprofessionals to meet to discuss student goals for the week (37: +4). As one participant explained, “Consistency is lacking and affects knowledge of info/best practices.” Another participant stated that “gossip, criticism of difference, talking negatively – tends to exclude team members who do have valuable contributions to success.” These participants’ responses seemed to indicate that a scheduled time to meet is needed to resolve these barriers.

This group also highly ranked conferencing after student escalations in behavior to discuss what helped and what could have been done differently (9: +4) as well as discussing procedures of how to diffuse escalated situations in student behavior (17: +3). As one participant stated, “Discussing the work... triggers, trials, and success, is how we should frame conversations”. However, these participants were also mindful of the hours that paraprofessionals are expected to work which may hinder their time to be a part of conversations (6: +3). One participant explained, “We have other obligations outside class and paperwork [that] we are barely able to complete. Most professional conversations are ‘on the fly.’” Yet they seem to view that because of their job title, paraprofessionals are often forced to do things like monitoring students during lunch and breakfast, hallway duty, etc. when teachers are at meetings (27: -1), which was ranked more neutrally. Yet, as one participant stated, “monitoring students is part of our job.”

This group also identified that including personal thoughts or preconceived notions instead of focusing on facts (3: +3) has a higher impact upon professional conversations. It seemed that there is not much time but to focus on the facts. Lack of quality planning time where all classroom paraprofessionals and the teacher are able to converse without student

presence (35: +2) seemed to also play a part in finding time to have professional conversations, and as one participant stated, “Lack of time is the biggest impediment to good communication.” It seems that this group recognized that there are time constraints for having the necessary professional conversations to solve problem behaviors within their classrooms and that they need to focus on what is important.

It is notable that the view on whether enough training on how to utilize paraprofessionals to help meet student goals (39: +1) was more neutral, so there seemed to be some confidence in the abilities of paraprofessionals. However, this group of participants valued least that teachers and paraprofessionals viewed themselves as lifelong learners (22: -4). As one participant explained, “Self-reflection as a lifelong learner or not would not necessarily impact one’s willingness to participate in productive professional conversations). Likewise, someone who does not like to reflect or think (29: -4) was rated low. Within this group, there seems to be less value placed upon having to think and reflect about behaviors. Similarly, there seems to be a lack of emphasis on being a life long learner.

Another low ranking statement was that the participants feel that they are so rarely able to voice their opinions in meaningful ways and that they think they don’t know how or when their opinions might be valuable (33: -4). One participant explained that her “aide has no trouble voicing her opinion!” Similarly, being able to feel like you can say what you think without sanction (16: -2) was viewed as having low impact. This subtle distinction seems to indicate that opinions are valued among this group, but they must be professional.

Interestingly, this group seems to not be so impacted by if there is a true dislike of personalities (5: -3). Similarly, a mutual respect of everyone’s contributions (31: -3) was ranked

low. Even building a support system and a sense of collegiality (4: -2) was ranked as less impactful. It seems that this group does not allow emotions to get in the way but are also not as likely to bond together as a team. Yet, this group does value providing opportunities to share expectations that team members have for each other (34: +3), and not having a clear understanding of the teachers' and paraprofessionals' roles and responsibilities (13: +2) may be viewed as an issue. Also, talking negatively about another adult in the classroom (14: +2) seems to not be as appreciated.

Communication as a priority (36: +2) seemed to have a value to this group of participants, and there seemed to be a slight expectation that teachers relay information to paraprofessionals that is vital to their job performance (18: +2). However, using a list or outline to keep conversations on target (10: -2) or movement toward candid conversations (20: -2) seemed to be not as valued. In fact, open communication among everyone within the classroom was rated more neutrally (21: 0).

In looking at the more neutrally ranked statements, Factor 2 participants seemed to not have strong viewpoints on whether the lead teacher plays a vital role in creating a positive climate in their classroom (11: 0), whether there is a lack of confidence on the part of the teacher or paraprofessionals (38: +1), if the relationship between the teachers and paraprofessionals must be viewed by all as a team (19: 0), if there is a lack of positive leadership from the teacher (32: 0), or if there is disagreement on goals or methods to reach goals (28: 0). The teacher setting the tone for how assistants are viewed by the students (24: -1) was also ranked more neutrally. Interestingly, the statement about the principal being the individual with the greatest positional authority and having an obligation to take the initiative in creating the conditions for productive

professional conversations (8: -3) was ranked more strongly as less impactful. These statement placements seemed to indicate that these participants do not place as high of a value on being part of a team or viewing the teacher, or even the principal, as a clear leader.

Also, these participants seemed to view being understaffed (12: 0) more neutrally, as well as everyone in the classroom needing to possess a sincere desire to help students to succeed (23: 0). However, the view that if the position is just filling a job, it will always show through and influence the climate of the classroom (7: -2) was ranked lower, and as one participant rationalized, that “person would not be hired.”

The participants in Factor 2 are found in both EBD and ASD locations, in both elementary and high school settings, tend to have at least some college education, have less than 14 years of experience in Education and have spent less than 4 years with the same group of classroom staff. Overall, they seem to recognize the need to reflect upon behaviors after student escalations and that time must be found to discuss how they will meet students’ goals each week. They need this structured time because they are often busy with other duties, there are always students around, and they adhere to the paraprofessionals’ start and end times. Because of these time constraints, they look to avoid too many personal thoughts, feelings, and beliefs in conversations and instead want to focus on the facts. They do not seem to dwell upon personality conflicts among other staff nor about the overall contributions of others. Maybe they are even not so concerned about their own contributions. There also seems to be less motivation to be a part of a classroom team and do not seem to care if the teacher has the abilities to lead within the classroom. These participants seem to not be life long learners and may not value training as much as others. With the higher rankings of preventing behaviors, it seems that these

individuals are just wanting to do their jobs without any interruptions, whether from students or from their coworkers. Their motivations seem to be driven more toward maintaining the status quo and avoiding micromanagement, but they will join conversations if guided. These participants are Guided Communicators.

Factor 3: Expert Communicators. Factor 3 has an eigenvalue of 4.00 and explains 10% of the study variance. Eight of 37 participants comprised this factor by having a significant factor loading above 0.41, $p < 0.01$. These eight participants included three paraprofessionals, four teachers, and one administrator. There were seven females and one male. Seven participants were White and one was African-American. Ages ranged from 21 to 48 years. Four participants were from elementary schools and four were from high schools. Seven participants were from self-contained ASD classrooms and one was from a self-contained EBD classroom. Two participants had a Master's degree and six had a Bachelor's. Experience in education ranged between 1 and 24 years. Experience with self-contained classrooms ranged between 1 and 10 years, and participants had been working with current classroom staff between 1 and 7 years.

Participants who comprised Factor 2 valued most that the relationship between the teachers and paraprofessionals must be viewed by all as a team (19: +4) and that the lead teacher plays a vital role in creating a positive climate in their classroom (11: +4). One teacher explained, "I have the obligation of taking initiative." Another said, "The climate in the room is essential to success." This group of participants seemed to view the classroom staff as a team with the teacher as the leader who sets the tone for interactions.

It seems that within this grouping, communication has to be a priority (36: +3). The teacher seems to be able to set this priority by establishing a structure that supports professional conversations about behaviors. These supports include conferencing after student escalations in behavior to discuss what helped and what could have been done differently (9: +3), discussing procedures of how to diffuse escalated situations in student behavior (17: +3), providing opportunities to share expectations that team members have for each other (34: +2), and starting the school year with a sharing of students' important information (26: +2). One participant explained that "paraprofessionals need to be trusted to know more about IEPs and such." Therefore, it seems that structural supports must also be complimented by emotional supports.

This grouping of participants seem to also view the teacher as being able to establish emotional supports by opening communication among everyone within the classroom (21: +3) by ensuring that team members are able to feel like they can say what they think without sanction (16: +2) and providing mutual respect for everyone's contributions (31: +2). As one participant stated, "People need to feel comfortable voicing their thoughts without fear. Though there also seems to be a pre-requisite that everyone in the classroom needs to possess a sincere desire to help students to succeed (23: +2). A participant explained, "It must start with people who want to work with [or] teach students."

The least impactful views about professional conversations about behaviors were disagreement on goals or methods to reach goals (28: -4) and lack of unity (15: -4). It seems that with the right structural and emotional supports that these would not be an issue to begin with. Likewise, structural supports should resolve the view that the hours that paraprofessionals are expected to work would hinder their time to be a part of conversations (6: -2) and that a lack of

quality planning time where all classroom paraprofessionals and the teacher are able to converse without student presence (35: -2). As one participant stated, “I don’t feel that in my room there is a lack of planning. My teacher informs us of all expectations and plans as they arise.”

Similarly, the emotional supports should resolve the view of including personal thoughts or pre-conceived notions instead of focusing on facts (3: -3), talking negatively about another adult in the classroom (14: -3), that often people will avoid conversations they find uncomfortable (25: -2), or that there could just be a true dislike of personalities (5: -2). As one participant explained, “People will vary [in] personalities/opinions. We do not all have to get along but we will have respect for one another.” It also seems that poor collaborative skills (40: -3) and that filling a job will always show through (7: -3) are not strong concerns for this group of participants since their impact was rated so low.

The more neutral views of this grouping of participants included more structural concerns such as that the principal is the individual with the greatest positional authority and has an obligation to take the initiative in creating the conditions for productive professional conversations (8: 0), the teacher not relaying information to paraprofessionals that is vital to their job performance (18: 0), paraprofessionals are often forced to do things like monitoring students and hallway duties when teachers are at meetings (27: 0), and it is important that the teacher and paraprofessionals have a scheduled time to meet to discuss student goals for the week (37: 0). These are all realities of working within a school, but structural supports may be in place within this grouping that resolve these concerns in order to provide opportunities to allow for professional conversations to occur. Similarly, the views of movement toward candid conversations (20: 0) and speaking to each other when problems arise instead of talking to others

who are not involved (1: 0) seem to assume that emotional supports help to prevent these concerns from becoming an issue. These supports seem to provide a proactive strategy for preventing misunderstandings.

Overall, this grouping of participants seems to follow a Path-Goal Theory approach to professional conversations. There are still a few barriers in place such as the strict hours that paraprofessionals work or the additional duties beyond teaching students that are expected of paraprofessionals, but there seems to be supports in place to help mitigate these barriers. Additionally, all eight of the participants who had significant factor loadings had at least a Bachelor's degree. It seems that these participants have received additional training in ensuring that all of the supports are in place to promote professional conversations about behaviors and how to identify the barriers that hinder conversations. These participants are Expert Communicators.

Factor 4: Hierarchical Communicators. Factor 4 has an eigenvalue of 6.40 and explains 16% of the study variance. Sixteen of 37 participants comprised this factor by having a significant factor loading above 0.41, $p < 0.01$. These 16 participants included two paraprofessionals, nine teachers, and five administrators. There were 12 females and four males. Fifteen participants were White and one was African-American. Ages ranged from 20 to 62 years. Nine participants were from elementary schools and seven were from high schools. Three participants were from self-contained EBD classrooms and 13 were from self-contained ASD classrooms. Six participants had a Master's degree, eight had a Bachelor's, and two had high school diplomas. Experience in education ranged between 1 and 30 years. Experience with

self-contained classrooms ranged between 1 and 20 years, and participants had been working with current classroom staff between 1 and 10 years.

Participants who comprised Factor 2 ranked that communication must be a priority (36: +4) as the most impactful statement for professional conversations about behaviors. As one participant explained, “If it isn’t a priority, the necessity for professional conversations can be overlooked and may not take place.” Another participant stated, “I believe the teacher and paras have to be on the same page as far as behavior plan interventions and how to achieve success. Being a team is very essential and communication is the key”. Interestingly, the next most impactful statement was about a lack of positive leadership from the teacher (32: +4). One participant stated that the “teacher often sets [the] stage.” Together, these statements seem to explain that this group views that communication is a priority, and that if it is not a priority, then it is the teacher’s fault. Interestingly, the principal as the individual with the greatest positional authority and having an obligation to take the initiative in creating the conditions for productive professional conversations (8: -2) was ranked much lower. This seems to compliment the view that the classroom leadership comes from the teacher.

Participants also ranked highly that the lead teacher plays a vital role in creating a positive climate in their classroom (11: +3), the relationship between the teachers and paraprofessionals must be viewed by all as a team (19: +3), and open communication exists among everyone within the classroom (21: +3). These all seem to indicate that this group values a teacher who sets up a collaborative environment. As one participant stated, “The positive [climate] set forth by the teacher is the most important part of setting the tone for the day.”

Additionally, teachers set the tone for how assistants are viewed by the students from day one (24: +2) and the teacher not relaying information to paraprofessionals that is vital to their job performance (18: +2) seemed to hint at an expectation of some level of respect given to paraprofessionals so that they can do their jobs. Moreover, if problems arise between teachers and paraprofessionals, they need to speak to each other instead of talking to others who are not involved (1: +2) and talking negatively about another adult in the classroom (14: +2) seemed also to reflect this expectation that classroom teams are expected to respect each other. One participant explained that talking negatively about another adult indicates “[l]acking the ability to trust one another”. These statements seem to compliment a lower ranked statement about rarely being able to voice opinions in meaningful ways and not knowing how or when opinions might be valuable (33: -3). This seems to indicate that opinions are valued and part of ensuring a respectful setting.

Interestingly, this grouping of participants seemed to value conferencing after student escalations in behavior in order to discuss what helped and what could have been done differently (9: +3), but of the four factors rated lowest the impact of discussing procedures of how to diffuse escalated situations in student behavior (17: +2). The former response to behaviors requires waiting for a crisis situation to occur before discussing what could have been done to prevent it; whereas the latter focuses on proactive behavioral interventions intended to prevent behaviors to begin with.

This grouping also rated lowest among all the factors that paraprofessionals need to be trusted to know more about students’ conditions and IEPs so that they can best participate in helping to meet behavioral goals (30: -2) as well as starting the school year with a sharing of

students' important information (26: -1). Within this grouping of participants, there seems to be a value given to professional conversations, but there seems to be a limit for what is discussed.

The lowest ranking item for what impacts professional conversations for this factor is that paraprofessionals are often forced to do things like monitoring students during lunch or hallway duty when teachers are at meetings (27: -4). One participant expressed, "Duty expectations have no impact on collegial experiences." Another explained, "Paraprofessionals doing duties outside the classroom does not impact any conversations I would have with my paras. I believe that you will find the time in the classroom if it is important." A third said, "Just because parapros are on their duties, that shouldn't negatively impact conversing." Finally, another participant stated that they "believe paras are willing to do what they have to do." This seems to compliment another lower ranked statement about not liking to reflect or think (29: -3). One participant explained that it "is part of the job regardless."

The next lowest ranking item for this factor was about being understaffed (12: -4). One participant stated, "Being understaffed doesn't impact a conversation." Another provided more detail that being understaffed "[d]oes not apply to conversations – more school related excuses." A third explained that "[b]eing understaffed and not liking parts of the job have nothing to do with what HAS to be done." Finally, one participant said, "Being understaffed is something a teacher does not have control [over]; however, with less staff I would collaborate whenever I could." This seems to be a sore spot. The first three statements were from administrators who seemed to feel that being understaffed is nothing more than an excuse. Given the time of year that this study was conducted, staff allocations for the next school year were on administrators' minds and will have been approved by the school board before this dissertation is defended.

This may be an environmental context to explain the ranking of this statement. The fourth statement was written by a teacher who seemed to use a different tone to indicate that she would make the best out of an understaffed type of situation, possibly because staff allocations are outside of her control.

Another lower ranked item involved paraprofessionals wanting the opportunity to be a part of professional learning communities (PLCs), data meetings, and trainings for teachers (2: -3). One participant stated that providing opportunities for paraprofessionals to be a part of meetings with teachers “would definitely be useful in the classroom, but not a huge impact.” Another explained, “Assistants really don’t want to be a part of professional development unless it’s specific to autism teaching strategies.” This statement seems to have a linkage with another low ranking statement about the hours paraprofessionals are expected to work that hinder their time to be a part of conversations (6: -3). PLC meetings tend to be before or after school in this school district. Additionally, paraprofessionals work during student contact hours and the 15 minutes before or after school. Any other meetings that teachers might attend together would occur during a common planning time, which is when paraprofessionals are with the students.

The more neutrally ranked items included providing opportunities to share expectations that team members have for each other (34: 0) and not having a clear understanding of the teachers’ and paraprofessionals’ roles and responsibilities (13: 0). These both seemed to deal with expectations. This seems to say that if the teacher does their part as the classroom leader, then these statements should not be an issue. However, if the teacher lacks positive leadership skills, then these statements may become issues. Similarly, other more neutral statements included that often people will avoid conversations they find uncomfortable (25: 0), a lack of

confidence on the part of a teacher or paraprofessional (38: 0), and poor collaborative skills (40: 0). Again, it seems that if the teacher has the leadership skills to address these concerns, then they should not be an issue. A final more neutral item was that just filling a job would always show through and influence the climate of the classroom (7: 0). The teacher does not generally play a role in hiring a position, so this ultimately falls upon an administrator.

Overall, this grouping of participants seemed to value communication but that it is the teacher's responsibility to ensure that communication is occurring. If professional conversations are not occurring between teachers and paraprofessionals, then that seems to indicate that there is a problem with the teacher's leadership abilities. While the principal may be the one in charge of the school, the teacher is in charge of the classroom and carries the responsibility for setting the tone in that classroom. When it comes to teacher meetings, paraprofessionals do not necessarily need to attend in order to have professional conversations. This perception may be in place because there seems to be an assumption that teachers only share information about students with paraprofessionals on a need to know basis. Information seems to travel downward as if in set ranks through the school hierarchy. There also seems to be a perception that paraprofessionals' contracted hours and being understaff are not issues that would affect these professional conversations and instead may be excuses. This group was comprised of five of the eight administrators from this study, and one in four participants were male. These participants are Hierarchical Communicators.

Chapter 4 Summary

In the first phase of this study, concourse development, nine participants provided statements that answered the following questions: "What helps teachers and paraprofessionals to

engage in professional conversations to support students' efforts to meet their behavioral goals?" and "What prevents teachers and paraprofessionals from engaging in professional conversations to support students' efforts to meet their behavioral goals?" These questions produced 136 statements to choose from which was then reduced down to 40 statements to be used in the Q set.

In the second phase of this study, Q sorting, these 40 statements were given to 37 participants who then sorted these statements within an inverted distribution table based upon the following condition of instruction designed for their position: "What best reflects your perspective regarding what impacts your professional conversations with paraprofessionals in supporting students' efforts to meet their behavioral goals?" (for teachers), "What best reflects your perspective regarding what impacts your professional conversations with teachers in supporting students' efforts to meet their behavioral goals?" (for paraprofessionals), and "What best reflects your perspective regarding what impacts professional conversations between teachers and paraprofessionals in supporting students' efforts to meet their behavioral goals?" (for administrators). The participants also provided rationales for positions of sorted statements and demographic information.

Next, the data was inputted into the PQMethod 2.11 software, which created a correlation matrix that was then used to conduct a principal component analysis to identify four factors to extract. Finally, varimax factor rotation was used on these four factors to create factor arrays that were then used in the factor interpretation process. Through the factor interpretation process, the following factors were described: Natural Communicators, Guided Communicators, Expert Communicators, and Hierarchical Communicators.

Chapter 5: Discussion

The purpose of this study was to explore the shared perspectives of teachers, paraprofessionals, and school administrators about professional conversations between teachers and paraprofessionals in self-contained classrooms for students with autism spectrum disorder (ASD) and/or emotional and behavioral disorders (EBD) in supporting students' efforts to meet their behavioral goals. Q methodology was chosen in order to take an exploratory approach to gain access to the viewpoints of teachers, paraprofessionals, and school administrators about these professional conversations. Using Q methodology allowed for the participants' viewpoints to be made operant and for these viewpoints to be understood holistically (Watts & Stenner, 2012). The research question for this study was "What are the shared perspectives of teachers, paraprofessionals, and administrators regarding what impacts professional conversations between teachers and paraprofessionals in supporting students' efforts to meet their behavioral goals?"

In the first phase of this study, concourse development, nine participants provided statements that answered the following questions: "What helps teachers and paraprofessionals to engage in professional conversations to support students' efforts to meet their behavioral goals?" and "What prevents teachers and paraprofessionals from engaging in professional conversations to support students' efforts to meet their behavioral goals?" These questions were based upon Path-Goal Theory of Leadership as a theoretical framework of this study. The nine concourse development interviewees included teachers, paraprofessionals, and administrators from schools with self-contained ASD and/or EBD classrooms. This phase produced 136 statements that were then reduced down to 40 statements to form the Q set.

In the second phase of this study, Q sorting, these 40 statements were given to 37 participants that included 15 teachers, 14 paraprofessionals, and 8 administrators from five schools with self-contained ASD or EBD classrooms. Each participant sorted these statements within an inverted distribution table based upon the following condition of instruction designed for each of their positions: “What best reflects your perspective regarding what impacts your professional conversations with paraprofessionals in supporting students’ efforts to meet their behavioral goals?” (for teachers), “What best reflects your perspective regarding what impacts your professional conversations with teachers in supporting students’ efforts to meet their behavioral goals?” (for paraprofessionals), and “What best reflects your perspective regarding what impacts professional conversations between teachers and paraprofessionals in supporting students’ efforts to meet their behavioral goals?” (for administrators). The participants also provided rationales for the positions of their sorted statements and their demographic information.

Next, the data was inputted into the PQMethod 2.11 software that created a correlation matrix that was then used to conduct a principal component analysis to identify four factors to extract. Finally, varimax factor rotation was used on these four factors to create factor arrays that were then used in the factor interpretation phase along with the participants’ statement placement rationales and demographic information. Through the factor interpretation process, the following factors were described: Natural Communicators, Guided Communicators, Expert Communicators, and Hierarchical Communicators.

This chapter will first provide a discussion of the data obtained during the concourse development phase, followed by a discussion of the factors extracted from the Q sort phase.

Next, the strengths of this study will be discussed as well as the limitations. Then, the implications for scholarly research, practice, and policy will be discussed. Finally, recommendations for future research will be given.

Discussion of Concourse Development Phase

Within the first phase of this study, concourse development, several concourse development interviewees provided statements that coincided with a key topic explored within the literature review: learning communities. One participant expressed:

I would like the opportunity to be a part of [professional learning communities (PLCs)], data meetings, trainings for teachers, etc. I'd like to be held to the same expectations as the teacher so she doesn't have to come back and train me.

In this particular school district, all instructional personnel were required to meet for an hour each week as part of a district level professional development initiative to form a PLC. Based upon the above participant's statement, it would seem that the PLC at this paraprofessional's school did not involve the entire school community as Huffman (2011) suggested, thus seeming to undermine the purpose of developing a PLC as "professionals in the school as they work collectively and purposefully to create and sustain an instructional culture for all students and adults" (Huffman, 2011, p. 333).

While many paraprofessionals in this school district may frequently be required to serve student monitoring duties while teachers are at their PLC or data meetings (Q set Statement 27), there does seem to be some evidence of a true professional learning community in many of the responses of the nine concourse development interviewees. For example, that same

paraprofessional as above stated, “I’m lucky enough to be with a teacher who helps me grow professionally. She allows me to ask questions and explains our goals for the kids.”

Unfortunately, within this school district, there is one detail that does place a limit on when paraprofessionals and teachers can have uninterrupted conversations (Q set Statement 35): Paraprofessionals are bound by a contract that only pays them hourly for student contact time plus 15 minutes before and after school. According to this contract, there is an expectation that paraprofessionals arrive and leave on time because there is no paid overtime option; therefore, paraprofessionals should only be at school when they are being paid. Teachers, too, are told in this school district by the teacher union to only work their contracted hours (7.5 hours), but realistically teaching is a nonstop job. There is always something for teachers to do. Even if all of the papers have been graded, all grades have been entered into the grade book, lesson plans have been updated two weeks in advance, receipts for field trip money have been filled out and sent home, all of the parents have just been sent an email of this week’s classroom newsletter, and all of the students have been brought up to the green level in their academic performance, there are still enrichment activities that can be developed to bring students’ achievements even higher. For being responsible for a job that never ends, teachers in self-contained classrooms tend to be very grateful for the assistance that paraprofessionals are able to provide. Yet, in a setting that values teamwork within a classroom, a limit seems to be placed in this targeted school district on a precious commodity: time. One participant provided the following as a barrier to professional conversations: “TIME! Teachers and paras need time where the students are not in the room where a conversation can be made!” Therefore, it seems that paraprofessionals may have trouble joining professional conversations during their contracted

work hours between 8:00am and 3:00pm (for elementary settings) since it may be difficult to discuss student behaviors when students are present.

In the 1960s and 1970s, the federal government (Pickett, Likins, and Wallace, 2003) passed legislation to establish and support instructional services for students as well as teacher educator programs for paraprofessionals who wanted to become teachers. What of the current supports that can be provided to paraprofessionals who in turn could better support our students? One concourse development interviewee expressed, “I don’t think we do enough training on how to utilize our paraprofessionals to help us meet student goals or training for paraprofessionals on how to support both the teacher and the student.” More alarming is a paraprofessional who explained:

I am an assistant, with a teaching degree. I would like the chance to be involved in teacher trainings so I can keep up with my certificate. However, because of my job title, I’m always forced to do things like lunch, breakfast, hallway duty, etc. when teachers are at the meetings. I’m not allowed to get a sub and go with the teachers when there is off campus training. I’m also not allowed to enroll in county provided classes because “my job title doesn’t require it.” I’ve had to do my own professional development to earn points to re-certify. I want to be a part of professional conversations, but my “title” hinders that. How can I grow professionally and be the best for the youth I’m teaching when I’m limited to potential opportunities?

Three paraprofessionals in this study had Bachelor’s degrees, three had Associate’s degrees, and one had a Master’s degree. Given that the federal government put supports in place in the 1960s and 1970s in the form of legislation to help paraprofessionals support our students, what supports

do we currently have in place for paraprofessionals in order to continue and grow this paraprofessional support for our students?

The participants in this study identified many supports in the first phase of this study through their responses in the concourse development questionnaires. These supports included that teachers answer questions and explain goals, zoning plans are created to outline which students that team members are working with and on what, each team member's role is understood, reflection occurs after crisis situations involving behaviors, discussions are held on how to diffuse escalated situations before they become crisis situations, open communication is maintained among all staff members in the classroom, administrators encourage open communication, weekly meetings are held to review progress and goals, details are shared about students' behaviors, common goals are set, everyone's contributions are mutually respected, paraprofessionals are trusted with relevant confidential information about students, teachers introduce paraprofessionals to students as a critical part of the team, and problems are resolved among those involved rather than involving others.

Given this sampling of the supports that have been provided by teachers, paraprofessionals, and administrators, have we provided enough supports already and therefore are ready to stop here? Or should we continue striving for more? Again, given that there are still enrichment activities that can be developed to bring students' achievements even higher and that we all have the potential to be lifelong learners, do we ever stop being students ourselves? Because, in keeping with the ideals of a knowledge community (Stanley, 2011), are schools only meant for student learning?

Discussion of Q Sorting Phase

The four factors of this study are Natural Communicators, Guided Communicators, Expert Communicators, and Hierarchical Communicators. Among the demographic information of the participants who comprised these factors, Natural Communicators (Factor 1) contained the most paraprofessionals with significant factor loadings (six out of ten participants), and was also the only factor without administrators. Guided Communicators (Factor 2) contained five paraprofessionals, three teachers, and two administrators. Expert Communicators (Factor 3) had three paraprofessionals, four teachers, and one administrator. Finally, Hierarchical Communicators (Factor 4) had two paraprofessionals, nine teachers, and five administrators. At first glance, it appears that the Natural Communicators and Hierarchical Communicators might be opposites of each other given that Natural Communicators was comprised of the most paraprofessionals and least administrators of the four factors and that Hierarchical Communicators was comprised of the least paraprofessionals and most administrators. However, in the correlations between factor scores provided by PQMethod 2.11 (See Table 8) showed that these two factors are the most correlated with a coefficient of 0.53, indicating a moderate positive relationship.

Another interesting demographic detail was that Natural Communicators were comprised of only participants from schools with ASD programs. Could this detail imply that teachers and paraprofessionals in self-contained ASD classrooms are more likely to talk in front of students than teachers and paraprofessionals in self-contained EBD classrooms? In that sense, it may be a bit unfair to say that staff in EBD classrooms are less likely to be natural communicators. Instead, maybe the barrier of finding time to discuss student behaviors without being in front of

students is more directly an issue within self-contained EBD classrooms? Or truly, the issue may be that some ASD teachers and paraprofessionals are finding those “natural” times throughout the day to discuss student behaviors at the expense of breaching an ethical consideration that involves discussing student details in front of students, which is largely considered to be disrespectful to that student as well as involving confidentiality concerns if other students are present. There would also be a question of whether these “professional” conversations in front of students actually follow professional guidelines, i.e. what is deemed appropriate. More research would be needed to explore this issue in more detail.

Additionally, given that Factor 1 consisted of no administrators, it may also be unfair to say that administrators are not natural communicators. School administrators, as expected, do not typically spend a large amount of their time within a self-contained classroom. Therefore, they cannot take advantage of natural opportunities to discuss student behaviors, as classroom staff may be able to do. While administrators within the targeted school district in this study are expected to make multiple classroom visits each day across the school, even if they were to stop within a self-contained classroom, they typically only observe and then later provide feedback based upon what they observed. This may constitute a barrier in itself in that administrators are less likely to observe behaviors for themselves in order to better join these types of professional conversations about helping students to make progress toward their behavioral goals.

Another meaningful demographic detail involved that the proportion of males was higher in Guided Communicators (2 out of 10 participants = 0.20) and Hierarchical Communicators (4 out of 16 participants = 0.25) than in the other two factors. Natural Communicators and Expert Communicators each only had one male participant who comprised those factors.

It is also worthwhile to discuss the number of years of experience in Education of participants who comprised each factor. Natural Communicators ranged between 3 and 20 years of experience. Guided Communicators ranged between 1 and 14 years. Expert Communicators ranged between 1 and 24 years, and Hierarchical Communicators ranged between 1 and 30 years. Natural Communicators were the only group that did not have beginning teachers or paraprofessionals. Maybe this indicates that they have been in the classroom long enough to find ways to communicate more effectively? How would the Natural Communicators have sorted these statements within their first and second years in the classroom, and how would they sort the statements beyond their 20th year? Would they respond similarly to Guided Communicators or Hierarchical Communicators outside of the 3 to 20 year range? More research would need to be conducted to answer these questions.

Additionally, the proportion of participants with at least a Bachelor's degree was lowest in Natural Communicators (5 out of 10 participants = 0.50) compared to Guided Communicators (6 out of 10 participants = 0.60), Expert Communicators (8 out of 8 participants = 1), and Hierarchical Communicators (14 out of 16 participants = 0.88). It was interesting that the factor with the most participants who only had high school diplomas (Natural Communicators with four out of six participants) also happened to be the factor that could be described as the most team centered grouping of participants. However, the group with the highest proportion of participants with at least a Bachelor's degree was Expert Communicators in which all participants had a degree. This group seemed to understand the best about the supports that can be put in place to encourage professional conversations and the barriers that may exist that prevent these conversations from occurring. So there is a question of if the participants who

comprised Expert Communicators really needed to complete college degree programs in order to understand how to support professional conversations within their classrooms if it is possible to naturally find ways to communicate as indicated by the Natural Communicators?

Granted, Hierarchical Communicators also had a high proportion of participants with Bachelor's degrees or higher and had by far the most participants with Master's degrees (six participants), yet this group seemed the least flexible about professional conversations, especially in terms of what information about students can be shared with paraprofessionals. It seems that Hierarchical Communicators place a greater value on maintaining the hierarchy within the school system. Hierarchical systems are not necessarily a bad thing, though. A chain of command helps to bring order and control. However, the two lowest ranked items of Natural Communicators, using lists to keep conversations on target (10: -4) and the principal is the individual with the greatest positional authority (8: -4), seemed to indicate that Natural Communicators tend to reject such hierarchy in which one participant described as "over-management."

However, Guided Communicators seemed to be the least motivated to engage in professional conversations about behaviors given that open communication among everyone within the classroom (21: 1) was rated more neutrally and that viewing themselves as lifelong learners (22: -4) and thinking and reflecting (29: -4) were both rated the lowest among all the factors. Professional conversations are important to this group, especially in order to be prepared for future escalations of student behaviors, but it seems that this group needs a scheduled time to meet. Interestingly, Hierarchical Communicators seem to compliment Guided Communicators in that their rating of communication as a priority (36: +4) is the highest among all the factors. It

seems that Guided Communicators could meet this expectation of communication as a priority if a time to communicate is scheduled by a Hierarchical Communicator or maybe an Expert Communicator who may understand the need for this support.

A difference between Natural Communicators and Guided Communicators is that while discussing procedures of how to diffuse escalated situations in student behavior (17: +4) was ranked right at the top for both factors, Natural Communicators also highly ranked conferencing after student escalations (9: +4). This seems to indicate that Natural Communicators do not just talk about behaviors when they happen but are also more focused on how to be more proactive in preventing the behaviors to begin with. However, is it that Natural Communicators are naturally drawn to engage in professional conversations or is it the nature of their classrooms that they have more significant behaviors that require more professional conversations about behaviors in order to decrease the likelihood of crisis situations from occurring. In other words, do Natural Communicators truly have the intrinsic motivation to communicate among their classroom team or is an extrinsic motivator (e.g. wanting to avoid injuries) pressing them to have these conversations? This is something that future research would need to explore.

The results of this study seem to indicate that different people have different needs when it comes to professional conversations. Some people (Natural Communicators) are just naturals when it comes to professional conversations and will find the time to communicate. Some people (Expert Communicators) need to have learned about how to put the right supports in place and to identify the barriers that may be hindering professional conversations. Some people (Guided Communicators) may need the right structures in place to allow them to join the

conversations, and some people (Hierarchical Communicators) may need to be in place to make sure that those supports are in place.

A team made up of only Natural Communicators or Expert Communicators may each be a rather effective group of classroom staff in terms of ensuring that professional conversations are occurring in order to guarantee that students get what behavioral supports they need to be successful. When combined, a Natural Communicator and Expert Communicator group may be able to continue to function successfully given that Natural Communicators tend to be naturals at communicating and Expert Communicators have learned how to effectively communicate. However, the world is not made up of only Natural Communicators and Expert Communicators.

For instance, if we were to add a Guided Communicator to a group of Natural Communicators, then the Guided Communicator may tend to become less effective because the Natural Communicators might not be as inclined to hold structured meetings to discuss student behaviors and instead take advantage of natural opportunities to discuss behaviors. In the reverse where a Natural Communicator is added to a group of Guided Communicators, this situation might frustrate the Natural Communicator because they might be limited to only discussing behaviors during scheduled meetings, something that they may feel is over-management.

A group of Expert Communicators on the other hand may be successful with a Guided Communicator, given that Expert Communicators tend to understand more about the barriers and supports for professional conversations. However, adding an Expert Communicator to a group of Guided Communicators may not be as successful if that Expert Communicator is not able to

put the right supports in place, especially if that Expert Communicator serves the role of a paraprofessional.

Similarly, there may not be problems if a Hierarchical Communicator is added to a group of Guided Communicators if that Hierarchical Communicator is the teacher and sets up a structure for opportunities for communication. In contrast, a Hierarchical Communicator as a teacher with Natural Communicators as paraprofessionals may not run as smoothly due to the Natural Communicators' possible perception of that structure as over-management.

One question is if it is possible to turn non-Natural Communicators into Expert Communicators through training? Maybe Expert Communicators are "reformed" communicators because they have learned to be more effective? Of course, Expert Communicators also ranked whether teachers and paraprofessionals view themselves as lifelong learners (22: +1) as the highest among all the factors, so maybe Expert Communicators are more intrinsically motivated to learn how to become more effective communicators. This may be where the second theoretical framework, motivating operations (See Figure 1), becomes more relevant in finding ways to motivate staff to engage in professional conversations.

Finally, there are no "bad" groups out of these four factors. Each one has advantages and disadvantages that may become more apparent with different combinations of groups. The key is to be able to understand what each type of person needs in order to be able to successfully communicate with each other to benefit student outcomes. Just as we, as educators, differentiate our instruction to meet students' needs, maybe we should also keep in mind that we may need to differentiate our interactions with adults to bring out the strengths in each other.

Strengths of the Study

What this study has allowed is access to the perspectives of paraprofessionals, teachers, and administrators about the professional conversations that occur between teachers and paraprofessionals. Specifically, using a Q methodological approach has allowed the perspectives of each of these types of individuals to become operant. What was once hidden within subjectivity was made visible in the form of how each participant sorted the 40 statements given to them about the supports and barriers of engaging in professional conversations about behaviors.

Additionally, with the *a posteriori* approach within Q methodology, the viewpoints of the participants are protected since no outside criterion for measuring a point of view is used, as would be typical with a more traditional quantitative methodological approach, so there are no right or wrong answers and a more holistic approach can be used for understanding the participants' viewpoints (Brown, 1993; McKeown & Thomas, 2013).

Limitations of the Study

Several limitations exist within this study. First, the first three participants who completed a Q sort arranged all of the positive sounding statements on the +1 to +4 side of the distribution chart and all of the negative sounding statements on the -1 to -4 side. This study was not about the participants' perceptions of which statements sounded positive and which sounded negative. These Q sorts were considered a pilot study and were not included in the 37 Q sorts entered into the PQMethod 2.11 software for analysis. As a result, the 37 participants each received explicit instructions for sorting based upon what most and least impacts professional conversations about behaviors with examples of how gossiping (something that was not in a

statement) could be something that most impacts professional conversations even though it has negative connotations. Eating ice cream was given as an example of something that least impacts professional conversations even though most people like ice cream. Regardless of these explicit directions, I have to wonder if the eight participants with significant factor loadings that comprised Factor 3 (Expert Communicators) simply ignored my directions and sorted statements based upon whether they sounded positive or negative which may have ended up with supports on the positive side and barriers on the negative side.

A second limitation involved the pre-sort activity for this study that asked for participants to indicate their level of professional conversations that are occurring within their classrooms based upon a scale of 0 to 100, and then give a rationale for why they chose that number. Participants frequently asked if this was intended to be a percentage or a frequency count. What was intended to be a quick activity turned into a several minute discussion in some cases. I provided examples of a 0 with the rationale of “I don’t like the people I work with. Why would I speak to them any more than what I have to?” as well as a 100 with a rationale of “We take every opportunity to talk in our classroom.” Also, this was a difficult activity for the administrators because they had to think about professional conversations among all of their self-contained classrooms. In a sense, they had to average each of these classroom interactions together. This also produced extended conversations in some cases with administrators in an attempt to explain what response I was looking for. A point of using Q methodology is to avoid influencing the participants’ viewpoints as well as to avoid priming them with the researcher’s own viewpoints. I may have ended up doing both with the pre-sorting activity due to the participants’ interest in better understanding the expectations for the task.

A third limitation involved difficulties in recruiting participants who have jobs after school hours. One participant did not write anything for the post-sort questionnaire involving rationales for statement placements and demographic information. I was able to gather some of the demographic information, but the statement placement details were not available. This participant had to leave to go to her next job, so she ran out of time to respond. She also contributed to Factor 4 (Hierarchical Communicators) as a paraprofessional, so her rationales would have been very valuable as additional information for including into the factor interpretation for a factor that comprised of many administrators. On the other hand, with some creative planning from a few teachers, two other paraprofessionals were relieved of student monitoring duties in order to catch a time during the school day that they were available. However, there was a paraprofessional at another school who was interested in the topic as I explained the directions to her teacher, but she couldn't stay to complete a sort. Efforts to set up a time to meet with her were unfruitful. Even with a smaller Q set of the 40 items used in this study and some very cooperative teachers, it was still an issue to find the time to collect data from paraprofessionals who have to work second jobs.

Fourth, my data sheet did not allow for a clear distinction for how long participants had worked with their current classroom team. Many put one number and some put two numbers (one for each other adult in the classroom). This detail was not a significant part of my study, but it would have been useful to have more precise data. Similarly, in the part where participants provided rationales for the statements placed at the -4 and +4 extremes, there was a space for each but I should have put parentheses as a prompt to write down the number of the corresponding statement to go along with each rationale. Many participants just wrote one

response, others put two responses that ended up matching with each statement on that extreme, but some did specifically indicate the corresponding statement. Again, this would have provided for more precise data collection.

Finally, the Q set statements were refined to avoid statements that contained double-barreled meanings or with two or more propositions (Watts & Stenner, 2012). My goal was to maintain as much of the original language as possible, but in doing so I left parts that may have caused trouble for the participants in the sorting process. For example, I did not take out the all caps for some of the words in statements. After developing the Q set, I thought that I had addressed any issues, but realized after data analysis that some statements could have been further refined.

Implications of the Study

Adds to scholarly research. Using a Q methodological approach helped to explore an aspect of professional conversations that was not as well researched. Haigh (2012), Sole and Wilson (2002), Clark et al. (1996), and Fisher and Rogan (2012) studied the purpose of dialog over a structured discussion. Haigh (2012) and Schneider and Parker (2013) looked at the importance of reflection as a part of professional conversations. Danielson (2016), Fisher and Rogan (2012), Ussher and Carss (2014), Tallman and Smith (2014), and Russo and Beyerbach (2001) found conditions that impacted the quality of professional conversations. What all of these studies had in common is that they involved teachers or student teachers. There unfortunately is not much research that specifically discussed the same type of professional conversations that occur between teachers and paraprofessionals.

There are many studies that discussed supervision requirements for paraprofessionals (French, 2001; Hughes & Vale-Riestra, 2008; Bauman, Silla, & Stufft, 2010; Brown & Devecchi, 2013; Marks, Schrader, & Levine, 1999; Giangreco, Edelman, Broer, & Doyle, 2001; Abbate-Vaughn, 2007; Maggin, Wehby, Moore-Partin, Robertson, & Oliver, 2009; Rueda & Monzó, 2002; Jones, Ratcliff, Sheehan, & Hunt, 2012), types of training provided to paraprofessionals (Carter, O'Rourke, Sisco, & Pelsue, 2009; Giangreco, Broer, & Edelman, 2002; Butler, Lauscher, Jarvis-Selinger, & Beckingham, 2004; Hall, Grundon, Pope, & Romero, 2010; Koegel, Kim, & Koegel, 2014; Maggin et al., 2012; Hughes & Valle-Riestra, 2008; Jones et al., 2012; Brock & Carter, 2015), or the training needs of paraprofessionals (Carter et al., 2009; Hughes & Valle-Riestra, 2008; Jones et al., 2012; Giangreco, Edelman, & Broer, 2003). Training alone does not generalize skills back into the classroom as well as training paired with performance feedback from a supervising teacher (Hall et al., 2010), especially if professional development takes the form of an intensive, ongoing, practice (Darling-Hammond et al., 2009). Professional learning communities (PLCs) are intended to provide this ongoing support by providing opportunities to discuss practices including those learned in formal professional development opportunities. Professional conversations are just one part of the continuum of formal and informal professional development (Eraut, 2004).

This study adds to the literature a description of four types of individuals and what may impact their engagement in professional conversations as an answer to the research question of this study: "What are the shared perspectives of teachers, paraprofessionals, and administrators regarding what impacts professional conversations between teachers and paraprofessionals in

supporting students' efforts to meet their behavioral goals?" These shared perspectives provided a glimpse into the viewpoints that included teachers, administrators, and paraprofessionals.

The first group found in this study are Natural Communicators and seem to find opportunities throughout the day to communicate about behaviors. The second group are Guided Communicators and seem to need structure to ensure that they join the conversations about behaviors. The third group are Expert Communicators and seem to have learned how to put the necessary supports in place to promote professional conversations and remove the barriers that inhibit them. The fourth group are Hierarchical Communicators and seem to value the role of the teacher as the classroom leader and the hierarchical structure found within school systems. Together, these factors may provide a starting point for the continuation of exploring the professional conversations between teachers and paraprofessionals.

Improves practice. These four factors (Natural Communicators, Guided Communicators, Expert Communicators, and Hierarchical Communicators) may help administrators, teachers, and paraprofessionals to understand what each type of communicator may need in order to be more successful communicators. This understanding fits within Path-Goal Theory of Leadership by identifying any possible barriers and the needed supports (both the structure and any emotional considerations) to help teachers and paraprofessionals support students' efforts to meet their behavioral goals. It may be important for each type of communicator, given their unique characteristics, to also understand how they may interact with each other. Knowing about these possible interactions within a classroom team may help to explain any establishing operations (current supports in place?) or abolishing operations (barriers

not yet addressed?) that may affect each adult's motivation to engage in professional conversations (See Figure 1).

Principals specifically may benefit from understanding more about the four types of communicators found in this study because it may help them to make more meaningful classroom staff placements. Placing Guided Communicator paraprofessionals with a Guided Communicator teacher may not be the best choice if no one makes the effort to provide the structure to engage in professional conversations. Instead, a Hierarchical or Expert Communicator as a teacher may be better placed with Guided Communicator Paraprofessionals, and a Guided Communicator teacher may benefit more from Expert Communicator paraprofessionals if the teacher is open to having their paraprofessionals provide the structure to communicate. Additionally, administrators may want to consider becoming Expert Communicators to increase their abilities in identifying the supports that each of their staff may require in order to engage in professional conversations as well as to understand the barriers that may be inhibiting those professional conversations.

In terms of training new teachers and paraprofessionals, as well as professional development in general, knowing about these possible four communication types may help each adult within a self-contained classroom to understand the communication needs of the other adults within that classroom. Reflecting upon and discussing the events that led up to and during an episode of behaviors is part of solving behavior problems. Therefore, it is important for all classroom staff to be able to communicate effectively together so that everyone can benefit from the collective viewpoints of those who witnessed an episode of behaviors. Excluding even one viewpoint may mean missing a vital detail that others had missed. At the very least, the results

of this study can prompt a conversation among any classroom team to identify and discuss each other's expectations of communicating with each other.

Improves policy. Craig (2009) warned against top-down initiatives as part of school reform. Instead, this study may help to inform district level administrators when making plans that involve professional development by focusing on the individual needs of school staff. We can simply expect all staff to do what their jobs descriptions say regardless of their individual characteristics, or we can view the needs of each person to ensure that they are able to successfully engage in professional conversations. Additionally, this study adds in the voices of paraprofessionals and may help to find more ways to ensure that they stay in the conversations that especially may only occur among district office specialists and administrators.

Recommendations for Future Research

Administrators generally have been teachers at some point in their educational career. Sometimes administrators go back to teaching. Sometimes paraprofessionals become teachers, and sometimes teachers choose to become paraprofessionals. Maybe an administrator started as a paraprofessional at the beginning of their career and moved up in rank over the years. It would be interesting to explore how perspectives are different among individuals who have experienced different roles.

It may also be interesting to examine the perspectives of teachers, paraprofessionals, and administrators based upon their earned degrees. Do they have a degree in Education or did they enter Education from another field? This would especially be interesting to explore among the Expert Communicators.

It may also be worthwhile to replicate this study and then interview the participants as a group within their respective factor groupings to gain more detail about what makes them a group. This would have the advantage of further defining these factors. As it is, this study is not generalizable. With more information and the use of other methodologies, it may be possible to explore these factors in more detail.

From a behavior analytic standpoint, it may also be worthwhile to explore the supports and barriers identified during the concourse development phase of this study as possible establishing and abolishing operations (See Figure 1). Do the identified supports act as establishing operations in that they increase the value of a consequence (e.g. earning points for recertification, learning a new effective teaching strategy, attention from other adults in the room) and increase the likelihood of a behavior occurring (i.e. engaging in professional conversations about behaviors with other adults)? Likewise, do the identified barriers act as abolishing operations in that they decrease the value of a consequence and decrease the likelihood of professional conversations about behavior from occurring?

Conclusion

As an exploratory study about professional conversations between teachers and paraprofessionals about supporting students' efforts to meet their behavioral goals, the factors found in this study may be the beginnings of a theory about the types of adult communicators within a classroom. Natural Communicators seem to find opportunities throughout the day to communicate about behaviors. Guided Communicators seem to need structure to ensure that they join the conversations about behaviors. Expert Communicators seem to have learned how to put the necessary supports in place to promote professional conversations and remove the

barriers that inhibit them. Hierarchical Communicators seem to value the role of the teacher as the classroom leader and the hierarchical structure found within school systems. With further research and an expansion of these factors into a more complete theory, this may be a worthwhile line of research to help administrators find a way to balance the needs of each member of their staff within self-contained classrooms for students with ASD and/or EBD and to ensure that professional conversations are occurring to improve the outcomes for students with significant behaviors.

Professional conversations about supporting students' efforts to meet their behavior goals are just one type of conversation but are worthy of more exploration given that problem behaviors often act as barriers to learning (Koegel, Singh, & Koegel, 2010; Wehby, Lane, & Falk, 2003). Positive behavior supports are needed to help proactively manage these behaviors (Fitzgerald, Geraci, & Swanson, 2014; Lane, Menzies, Ennis, & Bezdek, 2013), but professional development that is intensive, ongoing, and connected to practice is needed in order to have a greater chance of impacting practice (Darling-Hammond et al., 2009) as opposed to single-event workshops that may not provide paraprofessionals with the opportunity to generalize skills back into the classroom (Hall, Grundon, Pope, & Romero, 2010). Hall et al. (2010) further noted that workshops paired with performance feedback from the paraprofessionals' supervising teacher provided the best opportunities for generalization of skills across settings. Informal professional development, too, holds a significant role in complimenting the learning that occurs within these more formal professional development opportunities such as workshops (Eraut, 2004), and professional conversations within the classroom are just one form of informal professional development. However, paraprofessionals must also be recognized as vital members of a

student's educational team to join these conversations (Boudreau & Twig, 2011), and the perspectives of the participants who comprised Factor 1 (Natural Communicators) seemed to indicate that professional conversations can occur throughout the school day within classrooms for the purposes of proactively diffusing escalations in behavior (17: +4). It is important to gain a better understanding of these four types of communicators and the ways in which they interact with each other in self-contained classrooms in order to assist school administrators in facilitating more effective professional conversations in supporting students' efforts to meet their behavioral goals.

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Table 1
Correlation Matrix Between Sorts

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
1	100	49	35	30	36	40	2	14	34	13	4	27	20	53	36	34	16	28	16	59	12	14	22	15	-3	15	31	26	29	30	68	34	39	20	0	1	15
2	49	100	29	61	30	21	-11	18	40	35	15	7	20	38	29	57	26	5	34	43	24	17	37	21	-12	10	38	22	35	32	57	33	20	20	15	27	23
3	35	29	100	54	32	60	15	27	19	22	33	39	30	38	37	33	37	35	45	61	46	21	3	31	23	18	40	49	6	46	40	39	37	34	-21	25	-5
4	30	61	54	100	37	55	5	14	32	45	32	15	22	29	36	58	46	24	61	51	37	27	12	9	18	8	44	47	22	48	44	31	22	35	19	15	1
5	36	30	32	37	100	35	-11	26	20	11	6	11	15	13	36	54	36	30	33	42	16	24	8	23	13	27	31	14	3	30	35	22	21	35	-13	-1	-12
6	40	21	60	55	35	100	15	36	48	44	31	51	37	46	48	35	41	40	47	64	45	38	9	30	30	22	31	43	14	49	33	29	38	40	6	0	-5
7	2	-11	15	5	-11	15	100	27	21	34	7	22	5	6	19	-2	22	45	3	12	28	13	-11	-7	44	21	13	12	21	11	1	15	1	6	-9	0	-1
8	14	18	27	14	26	36	27	100	18	27	11	16	14	32	27	24	21	28	16	24	28	10	-1	22	2	18	6	26	7	23	23	7	-10	-4	-10	-34	-5
9	34	40	19	32	20	48	21	18	100	68	27	40	48	49	68	34	37	35	55	70	29	40	42	22	8	2	21	30	41	26	39	27	31	32	29	6	28
10	13	35	22	45	11	44	34	27	68	100	39	28	47	28	53	48	28	29	71	49	28	37	14	13	16	8	20	19	16	25	33	24	20	12	38	22	23
11	4	15	33	32	6	31	7	11	27	39	100	27	50	22	15	22	27	7	35	26	43	25	-21	32	15	-6	1	26	0	56	16	14	13	11	1	13	-4
12	27	7	39	15	11	51	22	16	40	28	27	100	19	64	40	27	46	38	20	47	27	48	22	49	39	23	30	39	46	35	36	46	45	51	3	18	36
13	20	20	30	22	15	37	5	14	48	47	50	19	100	26	51	44	15	20	56	62	40	27	12	29	-4	-17	6	17	3	42	12	19	3	9	-6	13	-2
14	53	38	38	29	13	46	6	32	49	28	22	64	26	100	66	40	43	36	29	52	31	37	41	39	-4	2	30	49	44	27	50	39	38	31	6	16	41
15	36	29	37	36	36	48	19	27	68	53	15	40	51	66	100	50	47	62	59	70	46	39	48	28	20	-2	44	46	21	32	29	26	34	44	9	17	33
16	34	57	33	58	54	35	-2	24	34	48	22	27	44	40	50	100	52	32	53	52	20	44	24	20	15	11	39	30	18	50	46	56	35	26	4	11	13
17	16	26	37	46	36	41	22	21	37	28	27	46	15	43	47	52	100	31	28	36	45	49	16	28	43	10	46	38	47	45	35	52	51	46	-10	4	23
18	28	5	35	24	30	40	45	28	35	29	7	38	20	36	62	32	31	100	30	48	35	41	24	11	50	7	45	38	3	45	10	17	27	38	-3	-17	10
19	16	34	45	61	33	47	3	16	55	71	35	20	56	29	59	53	28	30	100	59	19	40	15	2	11	-13	20	24	-3	32	21	22	2	13	12	19	8
20	59	43	61	51	42	64	12	24	70	49	26	47	62	52	70	52	36	48	59	100	47	35	28	31	23	18	35	47	32	48	52	37	48	48	6	12	18
21	12	24	46	37	16	45	28	28	29	28	43	27	40	31	46	20	45	35	19	47	100	10	-7	31	35	15	26	37	15	53	16	17	24	28	-6	21	18
22	14	17	21	27	24	38	13	10	40	37	25	48	27	37	39	44	49	41	40	35	10	100	22	25	36	-9	4	-6	32	18	22	30	24	38	10	-23	6
23	22	37	3	12	8	9	-11	-1	42	14	-21	22	12	41	48	24	16	24	15	28	-7	22	100	19	-17	-15	36	24	37	-1	21	18	25	43	27	6	46
24	15	21	31	9	23	30	-7	22	22	13	32	49	29	39	28	20	28	11	2	31	31	25	19	100	3	26	2	24	35	28	44	14	33	50	13	17	31
25	-3	-12	23	18	13	30	44	2	8	16	15	39	-4	-4	20	15	43	50	11	23	35	36	-17	3	100	36	22	10	9	34	-5	22	30	41	-11	-5	-3
26	15	10	18	8	27	22	21	18	2	8	-6	23	-17	2	-2	11	10	7	-13	18	15	-9	-15	26	36	100	-4	7	4	14	23	23	39	22	-13	11	1
27	31	38	40	44	31	31	13	6	21	20	1	30	6	30	44	39	46	45	20	35	26	4	36	2	22	-4	100	56	26	39	18	32	41	32	-3	30	13
28	26	22	49	47	14	43	12	26	30	19	26	39	17	49	46	30	38	38	24	47	37	-6	24	24	10	7	56	100	26	60	30	26	27	32	8	24	30
29	29	35	6	22	3	14	21	7	41	16	0	46	3	44	21	18	47	3	-3	32	15	32	37	35	9	4	26	26	100	1	50	27	28	47	27	1	35
30	30	32	46	48	30	49	11	23	26	25	56	35	42	27	32	50	45	45	32	48	53	18	-1	28	34	14	39	60	1	100	28	33	24	21	-17	6	13
31	68	57	40	44	35	33	1	23	39	33	16	36	12	50	29	46	35	10	21	52	16	22	21	44	-5	23	18	30	50	28	100	41	39	35	24	10	37
32	34	33	39	31	22	29	15	7	27	24	14	46	19	39	26	56	52	17	22	37	17	30	18	14	22	23	32	26	27	33	41	100	45	23	-16	24	22
33	39	20	37	22	21	38	1	-10	31	20	13	45	3	38	34	35	51	27	2	48	24	24	25	33	30	39	41	27	28	24	39	45	100	55	5	21	27
34	20	20	34	35	35	40	6	-4	32	12	11	51	9	31	44	26	46	38	13	48	28	38	43	50	41	22	32	32	47	21	35	23	55	100	20	9	31
35	0	15	-21	19	-13	6	-9	-10	29	38	1	3	-6	6	9	4	-10	-3	12	6	-6	10	27	13	-11	-13	-3	8	27	-17	24	-16	5	20	100	9	35
36	1	27	25	15	-1	0	0	-34	6	22	13	18	13	16	17	11	4	-17	19	12	21	-23	6	17	-5	11	30	24	1	6	10	24	21	9	9	100	40
37	15	23	-5	1	-12	-5	-1	-5	28	23	-4	36	-2	41	33	13	23	10	8	18	18	6	46	31	-3	1	13	30	35	13	37	22	27	31	35	40	100

Note. Numbers represent the correlation percentage for each Q sort, n = 37.

Table 2
Unrotated Factor Matrix

Factors	1	2	3	4	5	6	7	8	h ²	4 factor h ²
Q Sorts										
1	0.54	0.21	-0.01	-0.35	-0.31	-0.09	0.25	0.09	0.63	0.45
2	0.55	0.29	-0.31	-0.41	-0.11	0.00	-0.09	0.22	0.72	0.65
3	0.64	-0.30	0.09	-0.32	0.11	0.00	0.09	-0.08	0.64	0.61
4	0.65	-0.14	-0.24	-0.29	-0.04	0.15	-0.25	0.18	0.71	0.58
5	0.46	-0.17	0.01	-0.34	-0.46	0.00	-0.12	-0.14	0.60	0.36
6	0.71	-0.28	0.01	0.01	-0.06	-0.13	0.08	0.00	0.61	0.59
7	0.22	-0.31	0.29	0.42	0.06	0.12	0.12	0.56	0.75	0.41
8	0.32	-0.28	-0.04	0.04	-0.28	-0.26	0.53	0.29	0.69	0.19
9	0.68	0.16	-0.31	0.36	-0.04	-0.05	0.02	0.13	0.74	0.72
10	0.59	-0.08	-0.43	0.32	0.12	-0.03	-0.23	0.40	0.88	0.65
11	0.40	-0.37	-0.21	0.02	0.44	-0.37	-0.12	-0.16	0.71	0.34
12	0.65	0.11	0.38	0.25	0.15	-0.18	0.04	-0.13	0.71	0.63
13	0.49	-0.27	-0.50	0.13	0.17	-0.18	0.06	-0.28	0.73	0.58
14	0.70	0.29	0.00	0.06	0.01	-0.10	0.36	-0.10	0.72	0.57
15	0.77	0.03	-0.17	0.27	-0.04	0.24	0.20	-0.12	0.81	0.69
16	0.69	-0.05	-0.21	-0.22	-0.25	0.07	-0.28	-0.03	0.71	0.57
17	0.67	-0.06	0.29	0.05	-0.05	0.07	-0.22	-0.08	0.61	0.55
18	0.56	-0.29	0.20	0.33	-0.22	0.35	0.23	-0.04	0.78	0.55
19	0.59	-0.24	-0.59	0.11	-0.02	0.13	-0.22	0.00	0.82	0.76
20	0.84	-0.06	-0.14	-0.01	-0.07	-0.04	0.09	-0.03	0.74	0.73
21	0.55	-0.33	0.10	0.02	0.39	-0.05	0.17	0.05	0.60	0.42
22	0.51	-0.05	0.01	0.45	-0.36	-0.19	-0.34	-0.25	0.80	0.46
23	0.37	0.61	-0.11	0.18	-0.18	0.32	0.14	-0.21	0.76	0.56
24	0.46	0.21	0.19	-0.01	0.21	-0.54	0.10	-0.27	0.72	0.30
25	0.33	-0.42	0.55	0.30	0.00	0.14	-0.33	0.10	0.82	0.68
26	0.20	-0.10	0.51	-0.24	-0.03	-0.27	-0.12	0.40	0.62	0.37
27	0.54	0.04	0.15	-0.22	0.02	0.64	0.06	-0.01	0.78	0.37
28	0.60	0.00	0.08	-0.17	0.31	0.28	0.38	0.02	0.71	0.40
29	0.45	0.52	0.22	0.18	-0.07	-0.16	-0.01	0.16	0.60	0.55
30	0.62	-0.40	0.03	-0.22	0.21	0.02	0.10	-0.11	0.66	0.59
31	0.62	0.37	-0.01	-0.30	-0.15	-0.36	0.02	0.25	0.82	0.61
32	0.55	0.06	0.19	-0.22	-0.02	0.02	-0.25	0.05	0.46	0.39
33	0.56	0.22	0.43	-0.12	0.04	0.02	-0.22	-0.10	0.63	0.57
34	0.59	0.25	0.39	0.14	-0.03	0.01	-0.19	-0.25	0.68	0.58
35	0.11	0.49	-0.28	0.31	0.11	-0.05	-0.18	0.27	0.55	0.43
36	0.21	0.23	-0.07	-0.28	0.68	0.22	-0.22	0.08	0.74	0.18
37	0.33	0.62	0.07	0.16	0.36	0.07	0.07	0.07	0.67	0.52
Eigenvalues	11.13	3.08	2.70	2.24	1.92	1.77	1.62	1.46		
% explained variance	30	8	7	6	5	5	4	4		

Note. Unrotated factor loadings for each Q sort for each of the eight provided factors. h² = communality estimates for each Q sort. An additional h² was calculated for a four-factor solution.

Table 3
Humphrey's Rule

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
Cross Product of Two Highest Loadings	0.64	0.38	0.32	0.19	0.31	0.35	0.20	0.23
Standard Error (SE)	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
2SE	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Difference in Cross Product and 2SE	0.32	0.06	0.01	-0.13	-0.01	0.03	-0.12	-0.09

Note. Standard Error < 0.01.

Table 4
Information Used to Determine the Number of Factors to Extract

Factor Rotation Solutions	Explained Variance in Unrotated Factor Matrix	Kaiser-Guttman Criteria (EV>1)	Number of significant factor loadings (>0.41)	Humphrey's Rule	Reasoning
1 Factor	30	11.13	28	0.32	<i>Rejected</i> because of low explained variance.
2 Factors	38	3.08 – 11.13	5	0.06	<i>Rejected</i> because of low explained variance.
3 Factors	45	2.70 – 11.13	6	0.01	<i>Rejected</i> because of low explained variance.
4 Factors	51	2.24 – 11.13	3	-0.13	<i>Not rejected</i> because of Explained Variance, Kaiser-Guttman Criteria, Number of significant factors, and Humphrey's Rule found 4 factors.
5 Factors	56	1.92 – 11.13	3	-0.01	<i>Rejected</i> because of not meeting Humphrey's Rule.
6 Factors	61	1.77 – 11.13	2	0.03	<i>Rejected</i> because Factor 4 and 5 did not meeting Humphrey's Rule.
7 Factors	65	1.62 – 11.13	1	-0.12	<i>Rejected</i> because of not meeting Humphrey's Rule and not enough significant factor loadings (more than 1).
8 Factors	69	1.46 – 11.13	2	-0.09	<i>Rejected</i> because of not meeting Humphrey's Rule.

Note. Several approaches were used in deciding to extract four factors for this study.

Table 5

Factor-Exemplifying or Factor-Defining Q sorts for Five Factor Solution

Factor number	Q sort numbers	Total	Cumulative total
1	10, 13, 15, 19	4	4
2	14, 23 , 24, 29 , 33, 35, 37	7	11
3	7 , 17, 18 , 22, 25	5	16
4	1 , 2 , 4, 5 , 16 , 27, 32	7	23
5	21, 28, 36	3	26
Confounded	3, 6, 9, 11, 12, 20, 30, 31, 34	9	35
Non-significant	8, 26	2	37

Note. Factor 5 had only one factor with factor loading > 0.60. Factors with factor loadings > 0.60 are indicated in bold.

Table 6

Factor-Exemplifying or Factor-Defining Q sorts for Four Factor Solution

Factor number	Q sort numbers	Total	Cumulative total
1	10, 11, 13, 19	4	4
2	23, 29, 35, 37	4	8
3	7, 18 , 21, 22, 25	5	13
4	1, 2, 3 , 5, 27, 28, 30, 32, 33	9	22
Confounded	4, 6, 9, 12, 14, 15, 16, 17, 20, 31, 34	11	33
Non-significant	8, 24, 26, 36	4	37

Note. All four factors had at least two factor loadings > 0.60. Factors with factor loadings > 0.60 are indicated in bold.

Table 7

Factor-Exemplifying or Factor-Defining Q sorts for Three Factor Solution

Factor number	Q sort numbers	Total	Cumulative total
1	4, 10, 11, 13, 16, 19	6	6
2	1, 14, 23, 24, 29, 31 , 35, 37	8	14
3	7, 17, 18, 25 , 26	5	19
Confounded	2, 3, 6, 9, 12, 15, 20, 21, 30, 33, 34	11	30
Non-significant	5, 8, 22, 27, 28, 32, 36	7	37

Note. Factor 3 had only one factor with factor loading > 0.60. Factors with factor loadings > 0.60 are indicated in bold.

Table 8
Correlations Between Factors

Factors	1	2	3	4
1	1.00	0.23	0.28	0.53
2	0.23	1.00	0.07	0.34
3	0.28	0.07	1.00	0.32
4	0.53	0.34	0.32	1.00

Note. Factors 1 and 4 and Factors 2 and 4 have moderate positive relationships. Factors 1 and 2, Factors 1 and 3, and Factors 2 and 3 have weak positive relationships.

Table 9
Factor Characteristics

	Factor 1	Factor 2	Factor 3	Factor 4
Number of Defining Variables	7	4	4	13
Composite Reliability	0.97	0.94	0.94	0.98
Standard Error of Factor Scores	0.19	0.24	0.24	0.14

Note. Standard Error < 0.01. Standard deviation of each forced distribution (s_x) = 2.20.

Table 10
Participant Demographics

<u>Position</u>	
Paraprofessional	14
Teacher	15
Administrator	8
<u>Gender</u>	
Male	7
Female	30
<u>Race</u>	
African American/Black	3
Pacific Islander	1
White/Caucasian	33
<u>Age</u>	
20-29	9
30-39	8
40-49	11
50-59	7
60-69	2
<u>School Level</u>	
Elementary School	23
High School	14
<u>Type of Program</u>	
ASD	27
EBD	10
<u>Education Level</u>	
Master's	10
Bachelor's	17
Associate's	3
High School Diploma	7
<u>Years of Experience in Education</u>	
<1 Year	4
1 - 5 Years	9
5 - 10 Years	7
10 - 20 Years	10
20 - 30 Years	7

Note. n = 37.

Table 11
Factor Arrays

#	Statements (Q set)	1	2	3	4
1	If problems arise between teachers and paraprofessionals, they need to speak to each other instead of talking to others who are not involved.	3	1	0	2
2	Paraprofessional would like the opportunity to be a part of PLCs, data meetings, trainings for teachers, etc.	-3	-1	1	-3
3	Including personal thoughts or pre-conceived notions instead of focusing on facts.	0	3	-3	-1
4	Building a support system and a sense of collegiality.	1	-2	1	1
5	There could just be a true dislike of personalities.	0	-3	-2	-1
6	The hours paraprofessionals are expected to work, hinder their time to be a part of conversations.	-3	3	-2	-3
7	If the position, whether teacher or paraprofessional, is just filling a job, it will always show through and influence the climate of the classroom.	1	-2	-3	0
8	The principal is the individual with the greatest positional authority, and that individual has an obligation to take the initiative in creating the conditions for productive professional conversations.	-4	-3	0	-2
9	Conferencing after student escalations in behavior to discuss what helped and what could have been done differently.	4	4	3	3
10	Using a list or outline to keep conversations on target.	-4	-2	1	-1
11	The lead teacher plays a vital role in creating a positive climate in their classroom.	1	0	4	3
12	Being understaffed.	3	0	-1	-4
13	Not having a clear understanding of the teachers' and paraprofessionals' roles and responsibilities.	0	2	-1	0
14	Talking negatively about another adult in the classroom.	3	2	-3	2
15	Lack of unity.	2	1	-4	1
16	To be able to feel like you can say what you think without sanction.	-1	-2	2	-1
17	Discussing procedures of how to diffuse escalated situations in student behavior.	4	3	3	2
18	The teacher not relaying information to paraprofessionals that is vital to their job performance.	1	2	0	2
19	The relationship between the teachers and paraprofessionals must be viewed by all as a team.	2	0	4	3
20	Movement toward candid conversations.	-2	-2	0	-2
21	Open communication among everyone within the classroom.	-1	1	3	3
22	If teachers and paraprofessionals view themselves as lifelong learners.	-1	-4	1	-2
23	Everyone in the classroom needs to possess a sincere desire to help students to succeed.	2	0	2	1
24	From day 1, teachers set the tone for how assistants are viewed by the students.	0	-1	1	2
25	Often people will avoid conversations they find uncomfortable.	-2	-1	-2	0
26	Starting the school year with a sharing of students' important information.	2	1	2	-1
27	Because of their job title, paraprofessionals are often forced to do things like monitoring students during lunch and breakfast, hallway duty, etc. when teachers are at meetings.	-1	-1	0	-4
28	Disagreement on goals or methods to reach goals.	0	0	-4	1
29	You have to reflect, you have to think, and that's something I DON'T like to do.	-1	-4	-2	-3
30	Paraprofessionals NEED to be trusted to know more about students' conditions and IEPs, so they can best participate in helping to meet behavioral goals.	3	-1	1	-2
31	Mutual respect of everyone's contribution.	1	-3	2	1
32	Lack of positive leadership from the teacher.	1	0	-1	4
33	We are so rarely able to voice our opinions in meaningful ways I think we don't know how or when our opinions might be valuable.	-3	-4	-1	-3
34	Providing opportunities to share expectations that team members have for each other.	-3	3	2	0
35	Lack of quality planning time where all classroom paraprofessionals and the teacher are able to converse without student presence.	-2	2	-2	-1
36	Communication has to be a priority.	2	2	3	4
37	It's important that the teacher and paraprofessionals have a scheduled time to meet to discuss student goals for the week.	-1	4	0	1
38	A lack of confidence on the part of a teacher or paraprofessional.	-2	1	-1	0
39	I don't think we do enough training on how to utilize our paraprofessionals to help us meet student goals.	-2	1	-1	-2
40	Poor collaborative skills.	0	-1	3	0

Note. A factor array displays a single Q sort that approximates the viewpoint of a specific factor. Factor 1 = Natural Communicators. Factor 2 = Guided Communicators. Factor 3 = Expert Communicators. Factor 4 = Hierarchical Communicators.

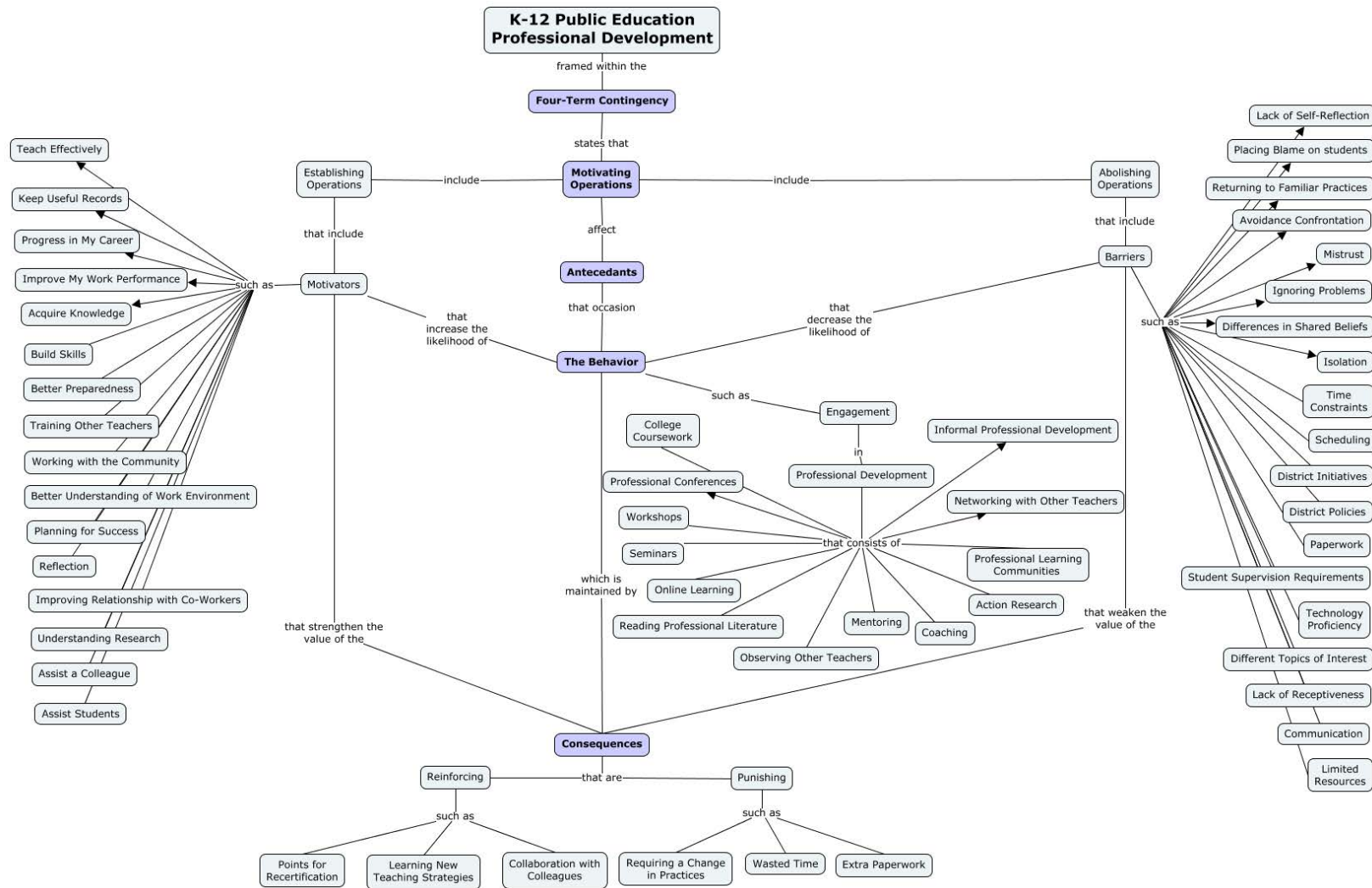


Figure 1. This example of a four-term contingency maps out how possible motivating operations may affect the likelihood of engaging in professional development and the value of its possible consequences. Motivating operations can be split into establishing operations and abolishing operations depending on whether they have a strengthening or weakening effect (respectively).

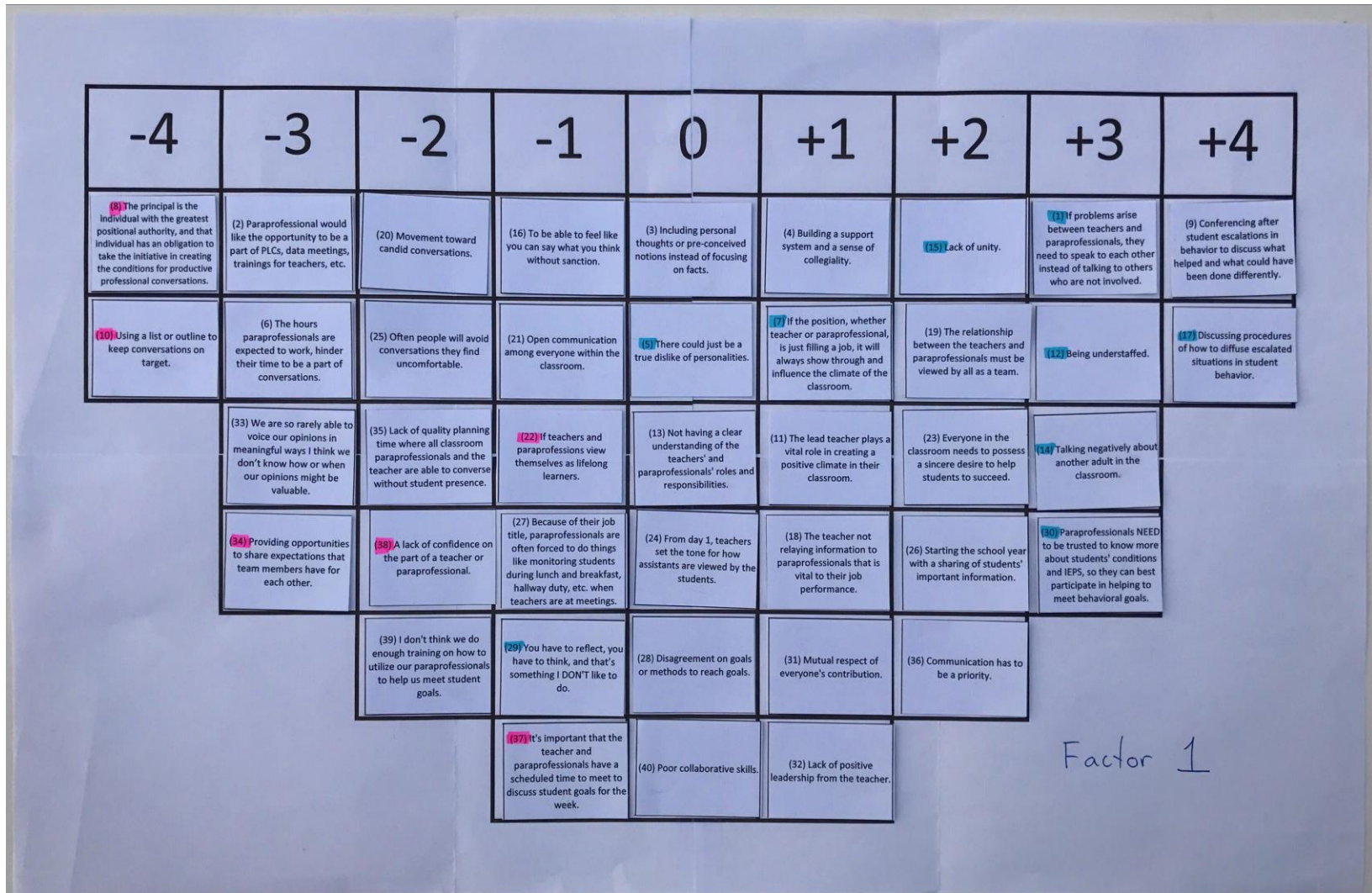


Figure 2. The Factor 1 Array, or Factor 1 exemplifying Q sort, represents the viewpoint of Factor 1. Blue statements denote the statements that were ranked higher in the Factor 1 Array than in other factor arrays. Pink statements denote the statements that were ranked lower in the Factor 1 Array than in other factor arrays.

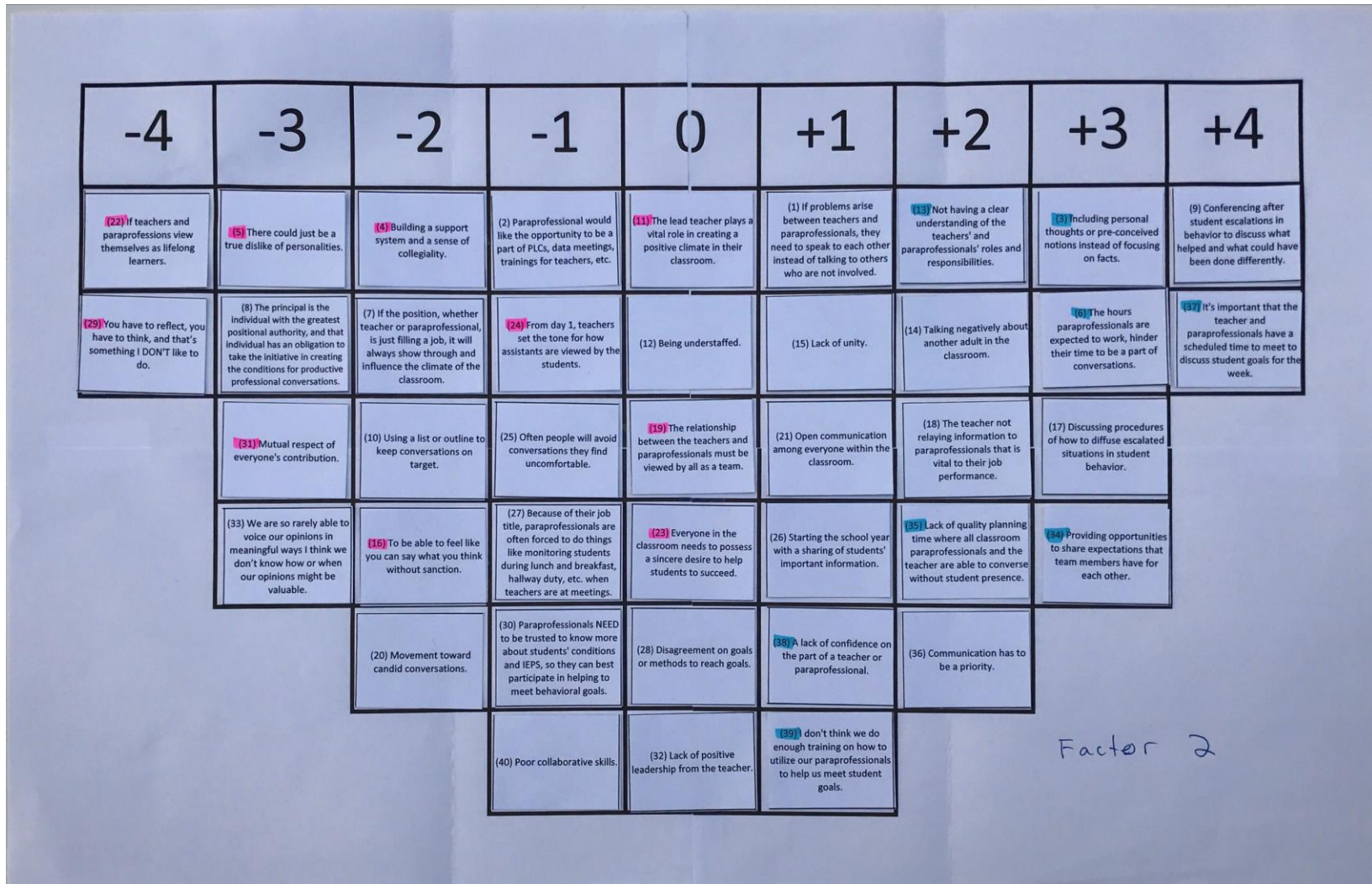


Figure 3. The Factor 2 Array, or Factor 2 exemplifying Q sort, represents the viewpoint of Factor 2. Blue statements denote the statements that were ranked higher in the Factor 2 Array than in other factor arrays. Pink statements denote the statements that were ranked lower in the Factor 2 Array than in other factor arrays.

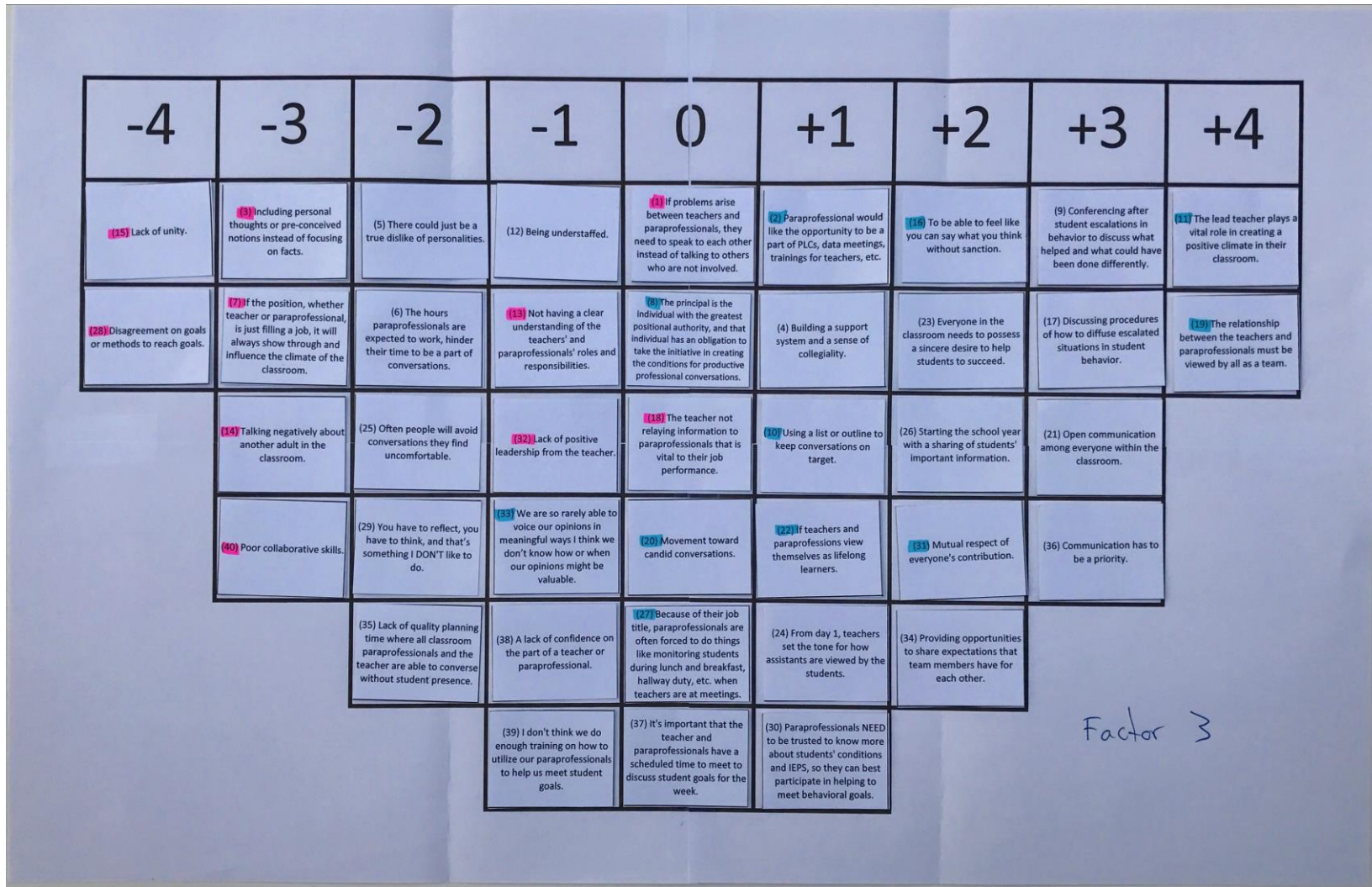


Figure 4. The Factor 3 Array, or Factor 3 exemplifying Q sort, represents the viewpoint of Factor 3. Blue statements denote the statements that were ranked higher in the Factor 3 Array than in other factor arrays. Pink statements denote the statements that were ranked lower in the Factor 3 Array than in other factor arrays.

-4	-3	-2	-1	0	+1	+2	+3	+4
(12) Being understaffed.	(2) Paraprofessional would like the opportunity to be a part of PLCs, data meetings, trainings for teachers, etc.	(8) The principal is the individual with the greatest positional authority, and that individual has an obligation to take the initiative in creating the conditions for productive professional conversations.	(3) Including personal thoughts or pre-conceived notions instead of focusing on facts.	(7) If the position, whether teacher or paraprofessional, is just filling a job, it will always show through and influence the climate of the classroom.	(4) Building a support system and a sense of collegiality.	(1) If problems arise between teachers and paraprofessionals, they need to speak to each other instead of talking to others who are not involved.	(9) Conferencing after student escalations in behavior to discuss what helped and what could have been done differently.	(13) Lack of positive leadership from the teacher.
(17) Because of their job title, paraprofessionals are often forced to do things like monitoring students during lunch and breakfast, hallway duty, etc. when teachers are at meetings.	(6) The hours paraprofessionals are expected to work, hinder their time to be a part of conversations.	(20) Movement toward candid conversations.	(5) There could just be a true dislike of personalities.	(13) Not having a clear understanding of the teachers' and paraprofessionals' roles and responsibilities.	(15) Lack of unity.	(14) Talking negatively about another adult in the classroom.	(11) The lead teacher plays a vital role in creating a positive climate in their classroom.	(39) Communication has to be a priority.
	(29) You have to reflect, you have to think, and that's something I DON'T like to do.	(22) If teachers and paraprofessionals view themselves as lifelong learners.	(10) Using a list or outline to keep conversations on target.	(25) Often people will avoid conversations they find uncomfortable.	(23) Everyone in the classroom needs to possess a sincere desire to help students to succeed.	(17) Discussing procedures of how to diffuse escalated situations in student behavior.	(19) The relationship between the teachers and paraprofessionals must be viewed by all as a team.	
	(33) We are so rarely able to voice our opinions in meaningful ways I think we don't know how or when our opinions might be valuable.	(30) Paraprofessionals NEED to be trusted to know more about students' conditions and IEPs, so they can best participate in helping to meet behavioral goals.	(16) To be able to feel like you can say what you think without sanction.	(34) Providing opportunities to share expectations that team members have for each other.	(28) Disagreement on goals or methods to reach goals.	(18) The teacher not relaying information to paraprofessionals that is vital to their job performance.	(21) Open communication among everyone within the classroom.	
		(39) I don't think we do enough training on how to utilize our paraprofessionals to help us meet student goals.	(26) Starting the school year with a sharing of students' important information.	(38) A lack of confidence on the part of a teacher or paraprofessional.	(31) Mutual respect of everyone's contribution.	(24) From day 1, teachers set the tone for how assistants are viewed by the students.		
			(35) Lack of quality planning time where all classroom paraprofessionals and the teacher are able to converse without student presence.	(40) Poor collaborative skills.	(37) It's important that the teacher and paraprofessionals have a scheduled time to meet to discuss student goals for the week.			

Factor 4

Figure 5. The Factor 4 Array, or Factor 4 exemplifying Q sort, represents the viewpoint of Factor 4. Blue statements denote the statements that were ranked higher in the Factor 4 Array than in other factor arrays. Pink statements denote the statements that were ranked lower in the Factor 4 Array than in other factor arrays.

Appendix A

Concourse Development Questionnaire – Page 1 of 3

Travis Brett Henderson – Principal Investigator

What helps teachers and paraprofessionals to engage in professional conversations to support students' efforts to meet their behavioral goals?

(Please describe as many as you feel are important to you.)

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

(Continue on the back if more space is needed)

Concourse Development Questionnaire – Page 2 of 3
Travis Brett Henderson – Principal Investigator

What prevents teachers and paraprofessionals from engaging in professional conversations to support students' efforts to meet their behavioral goals?

(Please describe as many as you feel are important to you.)

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

(Continue on the back if more space is needed)

Appendix B

Q Set

- (1) If problems arise between teachers and paraprofessionals, they need to speak to each other instead of talking to others who are not involved.
- (2) Paraprofessional would like the opportunity to be a part of PLCs, data meetings, trainings for teachers, etc.
- (3) Including personal thoughts or pre-conceived notions instead of focusing on facts.
- (4) Building a support system and a sense of collegiality.
- (5) There could just be a true dislike of personalities.
- (6) The hours paraprofessionals are expected to work, hinder their time to be a part of conversations.
- (7) If the position, whether teacher or paraprofessional, is just filling a job, it will always show through and influence the climate of the classroom.
- (8) The principal is the individual with the greatest positional authority, and that individual has an obligation to take the initiative in creating the conditions for productive professional conversations.
- (9) Conferencing after student escalations in behavior to discuss what helped and what could have been done differently.
- (10) Using a list or outline to keep conversations on target.
- (11) The lead teacher plays a vital role in creating a positive climate in their classroom.
- (12) Being understaffed.
- (13) Not having a clear understanding of the teachers' and paraprofessionals' roles and responsibilities.
- (14) Talking negatively about another adult in the classroom.
- (15) Lack of unity.
- (16) To be able to feel like you can say what you think without sanction.
- (17) Discussing procedures of how to diffuse escalated situations in student behavior.
- (18) The teacher not relaying information to paraprofessionals that is vital to their job performance.
- (19) The relationship between the teachers and paraprofessionals must be viewed by all as a team.
- (20) Movement toward candid conversations.
- (21) Open communication among everyone within the classroom.
- (22) If teachers and paraprofessionals view themselves as lifelong learners.
- (23) Everyone in the classroom needs to possess a sincere desire to help students to succeed.
- (24) From day 1, teachers set the tone for how assistants are viewed by the students.
- (25) Often people will avoid conversations they find uncomfortable.
- (26) Starting the school year with a sharing of students' important information.
- (27) Because of their job title, paraprofessionals are often forced to do things like monitoring students during lunch and breakfast, hallway duty, etc. when teachers are at meetings.
- (28) Disagreement on goals or methods to reach goals.
- (29) You have to reflect, you have to think, and that's something I DON'T like to do.
- (30) Paraprofessionals NEED to be trusted to know more about students' conditions and IEPs, so they can best participate in helping to meet behavioral goals.
- (31) Mutual respect of everyone's contribution.
- (32) Lack of positive leadership from the teacher.
- (33) We are so rarely able to voice our opinions in meaningful ways I think we don't know how or when our opinions might be valuable.
- (34) Providing opportunities to share expectations that team members have for each other.
- (35) Lack of quality planning time where all classroom paraprofessionals and the teacher are able to converse without student presence.
- (36) Communication has to be a priority.
- (37) It's important that the teacher and paraprofessionals have a scheduled time to meet to discuss student goals for the week.
- (38) A lack of confidence on the part of a teacher or paraprofessional.
- (39) I don't think we do enough training on how to utilize our paraprofessionals to help us meet student goals.
- (40) Poor collaborative skills.

Appendix C

Pre-sort Activity

This continuum from 0 to 100 represents the level of use of professional conversations in classrooms.

For teachers and paraprofessionals:

Indicate your level of use of professional conversations that are occurring within your classroom.

For administrators:

Indicate the level of use of professional conversations that you feel is occurring within your schools.

Please circle and describe your response below on the lines provided.

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100
 No professional conversations Frequent professional conversations

Q sort Inverted Distribution Chart

This inverted distribution chart will be used by participants to Q sort (rank) their Q sample statements.

What best reflects your perspective regarding what impacts your professional conversations with teachers in supporting students' efforts to meet their behavioral goals?

Least like what impacts professional conversations about behaviors

Neutral

Most like what impacts professional conversations about behaviors

-4	-3	-2	-1	0	+1	+2	+3	+4
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		<input style="width: 100%; height: 100%;" type="text"/>	<input style="width: 100%; height: 100%;" type="text"/>	<input style="width: 100%; height: 100%;" type="text"/>	<input style="width: 100%; height: 100%;" type="text"/>	<input style="width: 100%; height: 100%;" type="text"/>		
			<input style="width: 100%; height: 100%;" type="text"/>	<input style="width: 100%; height: 100%;" type="text"/>	<input style="width: 100%; height: 100%;" type="text"/>			

Post Q sort Questionnaire

- 1. If there are any additional items you might have wanted to include in your own set of statements:
 - a. What statement(s) would you add and where would you place it (-4) to (+4)?

- b. Why would this addition to the statements be important?

- 2. Are there any items about which you did not understand or found confusing? Please explain.

- 3. For the extreme far left and extreme far right statements, please provide the best rationale for each of their placements.

- a. Rationale for extreme far left (-4):

- b. Rationale for extreme far right (+4):

- 4. For statements placed in the center with a particular significance to you, please provide a rationale:

- 5. Please provide the following demographics:

Gender _____

Race/Ethnicity/nationality: _____

Age _____

School Level (Circle One)	Elementary	Junior High	High School
---------------------------	------------	-------------	-------------

Type of Program (Circle One; unless if administrator w/both):	ASD	EBD
---	-----	-----

Positional Title (Circle One)	Teacher	Paraprofessional	Administrator
-------------------------------	---------	------------------	---------------

Education Level _____

Years of Experience in Education _____

Years of Experience with Self-Contained Classrooms _____

Years of working with current teacher/paraprofessional (for teachers/paraprofessionals) _____

Years of experience as an administrator (for administrators) _____

Please use the back if you have any additional comments you would like to add.

Appendix D

Factor 1 Crib Sheet

Items Ranked at +4

9 Conferencing after student escalations in behavior to discuss what helped and what could have been done differently. (+4)

17 Discussing procedures of how to diffuse escalated situations in student behavior. (+4)

Principal Investigator's Thoughts: The focus is on crisis management and how to prevent behaviors to begin with. These individuals must not want to get injured.

Participant details:

9/17 They go hand in hand, to me.

17 I believe #17 is one of the most important aspects of my job. It keeps me motivated, present, and as a team, we have a united purpose when we utilize this; we are more effective.

9/17 I think discussing specific situations after they have occurred is key to breaking down/understanding student behaviors

Items Ranked Higher in Factor 1 Array than in Other Factor Arrays

1 If problems arise between teachers and paraprofessionals, they need to speak to each other instead of talking to others who are not involved. (+3)

14 Talking negatively about another adult in the classroom. (+3)

12 Being understaffed. (+3)

30 Paraprofessionals NEED to be trusted to know more about students' conditions and IEPs, so they can best participate in helping to meet behavioral goals. (+3)

15 Lack of unity. (+2)

7 If the position, whether teacher or paraprofessional, is just filling a job, it will always show through and influence the climate of the classroom. (+1)

5 There could just be a true dislike of personalities. (0)

29 You have to reflect, you have to think, and that's something I DON'T like to do. (-1)

Principal Investigator's Thoughts:

Focus on classroom behaviors with those involved in the classroom; avoid talking negatively about the people you need to talk about behaviors with; can you talk to others if you are understaffed?; paraprofessionals need to know the details to have these conversations; Everyone has to be together in solving behavior problems; everyone has to be committed to solving behavior problems together; Some people may not get along. Relationships among classroom team

Participant Details:

12/30 Being included in meetings, I feel is not as important to paraprofessionals as long as information is provided to us.

1 If you dislike someone's personality, you still can respect them.

Items Ranked Lower in Factor 1 Array than in Other Factor Arrays

34 Providing opportunities to share expectations that team members have for each other. (-3)

38 A lack of confidence on the part of a teacher or paraprofessional. (-2)

21 Open communication among everyone within the classroom. (-1)

37 It's important that the teacher and paraprofessionals have a scheduled time to meet to discuss student goals for the week. (-1)

Principal Investigator's Thoughts: Expectations and confidence are not necessarily needed; open communication or a scheduled time to meet are not necessarily needed. Just talk through behaviors as needed

Participant Details:

34 Having an adequate staff is extremely important in order to provide care and academics for the students.

34 I feel communication has the most impact. Communication sets the tone for the positives and negatives of how the kids respond and with how they respect you.

Items Ranked at -4

8 The principal is the individual with the greatest positional authority, and that individual has an obligation to take the initiative in creating the conditions for productive professional conversations. (-4)

10 Using a list or outline to keep conversations on target. (-4)

Principal Investigator's Thoughts: How often does the principal come into the classroom? How much control does the principal really have? Does a list really help to have a conversation about behaviors? The less formal authority the better

Participant Details:

10 Doesn't seem as necessary for me. I think that this should inherently be a "non-issue". It seems to be another level of problems irrelevant to behavior conversations.

10 I think these tactics are unnecessary and an example of over-managing employees.

8 I feel communication has the most impact. Communication sets the tone for the positives and negatives of how the kids respond and with how they respect you.

Items Ranked at 0

3 Including personal thoughts or pre-conceived notions instead of focusing on facts. (0)

5 There could just be a true dislike of personalities. (0)

13 Not having a clear understanding of the teachers' and paraprofessionals' roles and responsibilities. (0)

24 From day 1, teachers set the tone for how assistants are viewed by the students. (0)

28 Disagreement on goals or methods to reach goals. (0)

40 Poor collaborative skills. (0)

Principal Investigator's Thoughts: Your personal thoughts, feelings, expectations, disagreements, and collaboration don't really matter. Just focus on avoiding behaviors to begin with.

Participant Details:

3 #3 should be considered, because it's a natural thing, but as a professional, it should be set aside.

Additional Items

19 The relationship between the teachers and paraprofessionals must be viewed by all as a team. (+2)

23 Everyone in the classroom needs to possess a sincere desire to help students to succeed. (+2)

26 Starting the school year with a sharing of students' important information. (+2)

30 Communication has to be a priority. (+2)

Principal Investigator's Thoughts: All four of these statements deal with teamwork and communication.

2 Paraprofessional would like the opportunity to be a part of PLCs, data meetings, trainings for teachers, etc. (-3)

35 Lack of quality planning time where all classroom paraprofessionals and the teacher are able to converse without student presence. (-2)

Principal Investigator's Thoughts: A scheduled time to meet is not necessary.

Participant details:

35 It seems to be another level of problem irrelevant to behavior conversations.

2 Having an adequate staff is extremely important in order to provide care and academics for the students.

2 I think these tactics are unnecessary and an example of over-managing employees.

6 The hours paraprofessionals are expected to work, hinder their time to be a part of conversations. (-3)

Principal Investigator's Thoughts: Conversations are happening during the school day, not before or after school.

33 We are so rarely able to voice our opinions in meaningful ways I think we don't know how or when our opinions might be valuable. (-3)

20 Movement toward candid conversations. (-2)

25 Often people will avoid conversations they find uncomfortable. (-2)

Principal Investigator's Thoughts: When these conversations do occur, there is no concern about voicing opinions, speaking candidly, or avoiding uncomfortable conversations.

39 I don't think we do enough training on how to utilize our paraprofessionals to help us meet student goals. (-2)
Principal Investigator's Thoughts: There is enough training already or this is not something that is needed.

31 Mutual respect of everyone's contribution. (+1)

Participant Details:

31 If you dislike someone's personality, you still can respect them.

Demographics*:

Participants with non-confounded significant factor loadings >0.60

P- ----AB- - -

P- ----AH- - -

T- ----AB- - -

Additional participants with non-confounded significant factor loadings >0.41

P- ----AH- - -

Participants with confounded significant factors

T- ----AM- - -

P- ----AH- - -

P- ----AA- - -

P- ----AH- - -

T- ----AB- - -

T- ----AB- - -

Summary of Demographics: There are no administrators in this factor. This factor is predominately made up of paraprofessionals (Of the 10 participants, 6 are paraprofessionals and 4 are teachers). The one male participant is a teacher. Ages range from 26 to 55. 6 Elementary and 4 High School. All are from self-contained ASD. 1 Master's degree, 4 Bachelor's, 1 Associate's, 4 High School Diplomas. Between 3 and 20 years of experience in education. Between 1 and 20 years with self-contained experience. Between 1 and 9 years with working with current classroom staff.

Principal Investigator's Thoughts: These participants are from self-contained ASD and are made up primarily of paraprofessionals with some teachers. There are no brand new to education participants, but there is one teacher new to self-contained classrooms. This is a viewpoint that exists at both elementary and high school levels.

*Demographic details are redacted here to ensure confidentiality. Remaining demographics include position, program, and degree level.

Factor 2 Crib Sheet**Items Ranked at +4**

- 9 Conferencing after student escalations in behavior to discuss what helped and what could have been done differently. (+4)
- 37 It's important that the teacher and paraprofessionals have a scheduled time to meet to discuss student goals for the week. (+4)

Principal Investigator's Thoughts: These individuals recognized that they need to reflect on student escalations in behaviors, but want a more structured time for this reflection. This group is similar to Factor 1 in that they want the behaviors to improve, but the motivation is different (more about themselves than the team).

Participant Details:

- 9 Discussing the work... triggers, trials, and success, is how we should frame conversations. (+4)
- 37 Gossip – criticism of difference – talking negatively – tends to exclude team members who do have valuable contributions to success.
- 37 Consistency is lacking and affects knowledge of info/best practices (+4)

Items Ranked Higher in Factor 2 Array than in Other Factor Arrays

- 3 Including personal thoughts or pre-conceived notions instead of focusing on facts. (+3)
- 6 The hours paraprofessionals are expected to work, hinder their time to be a part of conversations. (+3)
- 34 Providing opportunities to share expectations that team members have for each other. (+3)
- 35 Lack of quality planning time where all classroom paraprofessionals and the teacher are able to converse without student presence. (+2)

Principal Investigator's Thoughts: A scheduled time is important to these individuals, personal thoughts may get in the way given the limited time of the paraprofessionals' contracted work hours. So structure is needed to honor this limited time. This time before and after school is valued so that they may talk about students' behaviors without the student being present. They need distraction free time.

Participant Details:

- 35 Lack of time is the biggest impediment to good communication. (+4)
- 6 Gossip – criticism of difference – talking negatively – tends to exclude team members who do have valuable contributions to success.
- 6 We have other obligations outside class and paperwork we are barely able to complete. Most professional conversations are "on the fly." (+4)

- 13 Not having a clear understanding of the teachers' and paraprofessionals' roles and responsibilities. (+2)
- 38 A lack of confidence on the part of a teacher or paraprofessional. (+1)
- 39 I don't think we do enough training on how to utilize our paraprofessionals to help us meet student goals. (+1)

Principal Investigator's Thoughts: These individuals are less sure of their roles, may be less confident in themselves, and may need more guidance or training. These individuals may not be self-starters. They recognize that they need to be proactive, so someone else may need to lead it.

Participant Details:

- 39 Having productive conversations (professional) isn't always natural, training and practice are key factors to success. (+4)

Items Ranked Lower in Factor 2 Array than in Other Factor Arrays

- 5 There could just be a true dislike of personalities. (-3)
- 31 Mutual respect of everyone's contribution. (-3)
- 4 Building a support system and a sense of collegiality. (-2)
- 16 To be able to feel like you can say what you think without sanction. (-2)
- 24 From day 1, teachers set the tone for how assistants are viewed by the students. (-1)
- 11 The lead teacher plays a vital role in creating a positive climate in their classroom. (0)
- 19 The relationship between the teachers and paraprofessionals must be viewed by all as a team. (0)
- 23 Everyone in the classroom needs to possess a sincere desire to help students to succeed. (0)

Principal Investigator's Thoughts: These individuals do not seem to care if they dislike someone that they are working with. They do not appear to be concerned about other's contributions. They do not seem to be interested in

being a team or valuing teamwork. Do not seem to be concerned about voicing their concerns. They may not view the teacher as their leader. Just doing my job.

24 teacher should set the tone and set the course (0)

Items Ranked at -4

22 If teachers and paraprofessionals view themselves as lifelong learners. (-4)

29 You have to reflect, you have to think, and that's something I DON'T like to do. (-4)

33 We are so rarely able to voice our opinions in meaningful ways I think we don't know how or when our opinions might be valuable. (-4)

Principal Investigator's Thoughts: These individuals do not necessarily value lifelong learning, reflecting, or voicing their options. But they seem to see a need for improving behaviors to improve their own experiences in the classroom.

Participant Details:

29 Really – Someone doesn't like to "think"? -4

33 My aide has no trouble voicing her opinion! -4

22 Self reflection as a lifelong learner or not would not necessarily impact ones willingness to participant in productive professional conversations. (-4)

Items Ranked at 0

11 The lead teacher plays a vital role in creating a positive climate in their classroom. (0)

19 The relationship between the teachers and paraprofessionals must be viewed by all as a team. (0)

32 Lack of positive leadership from the teacher. (0)

28 Disagreement on goals or methods to reach goals. (0)

Principal Investigator's Thoughts: The team is not as valued.

12 Being understaffed. (0)

23 Everyone in the classroom needs to possess a sincere desire to help students to succeed. (0)

Principal Investigator's Thoughts: Whether or not someone doing their job well does not seem to impact these individuals' abilities to do their job.

Participant Details:

28 Disagreement is the biggest impediment on how to proceed in case of a behavior in the classroom. (+4)

12 [understaffed] an excuse for sure, but small groups can and have made great impacts and collaborate well together. (-4)

Additional Items

17 Discussing procedures of how to diffuse escalated situations in student behavior. (+3)

Principal Investigator's Thoughts: These individuals seem to want to avoid episodes of behaviors. This makes their job easier?

14 Talking negatively about another adult in the classroom. (+2)

20 Movement toward candid conversations. (-2)

Principal Investigator's Thoughts: They seem to not care about what people think, but want to avoid people vocalizing negative comments. They just want to come to work and do their job and be neutral.

18 The teacher not relaying information to paraprofessionals that is vital to their job performance. (+2)

36 Communication has to be a priority. (+2)

Principal Investigator's Thoughts: They seem to want to know about what will make their job easier. They are not looking for dialog, just the facts.

8 The principal is the individual with the greatest positional authority, and that individual has an obligation to take the initiative in creating the conditions for productive professional conversations. (-3)

Principal Investigator's Thoughts: They don't seem to want their boss involved.

10 Using a list or outline to keep conversations on target. (-2)

Principal Investigator's Thoughts: They seem to want structure, but want to avoid micromanagement.

7 If the position, whether teacher or paraprofessional, is just filling a job, it will always show through and influence the climate of the classroom. (-2)

Principal Investigator's Thoughts: This seems to confirm their belief that they are just there to do there to do their job.

Participant Details:

7 just being [the in-a-job-person] would not be hired (-4)

27 Because of their job title, paraprofessionals are often forced to do things like monitoring students during lunch and breakfast, hallway duty, etc. when teachers are at meetings. (-1)

Participant Details:

27 monitoring students is part of our job (-4)

15 Lack of unity. (+1)

Participant Details:

15 I personally feel unified with my teacher and partner (0)

21 Open communication among everyone within the classroom. (+1)

Participant Details:

21 Open communication/para teacher (0)

Demographics*:

Participants with non-confounded significant factor loadings >0.60

T- - - -EB- - -

A- - - -EM- - -

P- - - -EA- - -

Additional participants with non-confounded significant factor loadings >0.41

P- - - -EA- - -

Participants with confounded significant factors

P- - - -AA- - -

P- - - -AB- - -

T- - - -AB- - -

P- - - -AH- - -

A- - - -EM- - -

T- - - -EB- - -

Summary of Demographics: Of ten participants with significant factor loadings, there were 2 administrators, 3 teachers, and 5 paraprofessionals. There were two males. 1 African-American and 9 White participants. Ages ranged from 28 to 58. 7 elementary and 3 high school. 6 EBD and 4 ASD. 2 Master's degree, 4 Bachelor's degrees, and 3 Associate's, and 1 high school diploma. Between 1 and 14 years of experience in education. Between 1 and 10 years with self-contained experience. Between 1 and 4 years with working with current classroom staff.

Principal Investigator's Thoughts: This group is found in both elementary and high schools as well as in EBD and ASD self-contained classrooms. This group has between 1 and 14 years of experience in education with between 1 and 10 years of experience with a self-contained classroom. These classroom teams are from 1 to 4 years old.

*Demographic details are redacted here to ensure confidentiality. Remaining demographics include position, program, and degree level.

Factor 3 Crib Sheet**Items Ranked at +4**

- 19 The relationship between the teachers and paraprofessionals must be viewed by all as a team. (+4)
 11 The lead teacher plays a vital role in creating a positive climate in their classroom. (+4)

Principal Investigator's Thoughts: This is teacher centered. The classroom functions as a team with the teacher as the leader. The teacher sets the tone for interactions and expected to initiate the professional conversations.

Participant Details:

- 11 I have the obligation of taking initiative.
 11 The climate in the room is essential to success.
 11/24 Useless conversation is not needed in the classroom with students present. Respect between coworkers is important and needed.

Items Ranked Higher in Factor 3 Array than in Other Factor Arrays

- 16 To be able to feel like you can say what you think without sanction. (+2)
 31 Mutual respect of everyone's contribution. (+2)
 10 Using a list or outline to keep conversations on target. (+1)
 22 If teachers and paraprofessionals view themselves as lifelong learners. (+1)
 2 Paraprofessional would like the opportunity to be a part of PLCs, data meetings, trainings for teachers, etc. (+1)
 8 The principal is the individual with the greatest positional authority, and that individual has an obligation to take the initiative in creating the conditions for productive professional conversations. (0)
 20 Movement toward candid conversations. (0)
 27 Because of their job title, paraprofessionals are often forced to do things like monitoring students during lunch and breakfast, hallway duty, etc. when teachers are at meetings. (0)
 33 We are so rarely able to voice our opinions in meaningful ways I think we don't know how or when our opinions might be valuable. (-1)

Principal Investigator's Thoughts: More about the structure for professional conversations and the need to include paraprofessionals with the teacher responsible for leading the conversations. Gives paraprofessionals the freedom to voice their opinions.

Participant Details:

- 2 I want the same learning opportunities as teachers.
 27 I don't like feeling like I'm "the help" or viewed as not capable of having the same ability as the teachers do in meetings.
 16/31 People need to feel comfortable voicing their thoughts without fear.
 33 Opinions have always been welcomed (in my experience).

Items Ranked Lower in Factor 3 Array than in Other Factor Arrays

- 3 Including personal thoughts or pre-conceived notions instead of focusing on facts. (-3)
 7 If the position, whether teacher or paraprofessional, is just filling a job, it will always show through and influence the climate of the classroom. (-3)
 14 Talking negatively about another adult in the classroom. (-3)
 40 Poor collaborative skills. (-3)
 13 Not having a clear understanding of the teachers' and paraprofessionals' roles and responsibilities. (-1)
 32 Lack of positive leadership from the teacher. (-1)
 1 If problems arise between teachers and paraprofessionals, they need to speak to each other instead of talking to others who are not involved. (0)
 18 The teacher not relaying information to paraprofessionals that is vital to their job performance. (0)

Principal Investigator's Thoughts: Assumed that communication is present.

Participant Details:

- 3 In dealing with behaviors, if people go off of "pre-conceived notions" they are not open to trying new strategies and working towards moving a student forward.

Items Ranked at -4

- 28 Disagreement on goals or methods to reach goals. (-4)

15 Lack of unity. (-4)

Principal Investigator's Thoughts: These are not even issues because of the structure of open communication.

Participant Details:

Items Ranked at 0

- 1 If problems arise between teachers and paraprofessionals, they need to speak to each other instead of talking to others who are not involved. (0)
- 8 The principal is the individual with the greatest positional authority, and that individual has an obligation to take the initiative in creating the conditions for productive professional conversations. (0)
- 18 The teacher not relaying information to paraprofessionals that is vital to their job performance. (0)
- 20 Movement toward candid conversations. (0)
- 27 Because of their job title, paraprofessionals are often forced to do things like monitoring students during lunch and breakfast, hallway duty, etc. when teachers are at meetings. (0)
- 37 It's important that the teacher and paraprofessionals have a scheduled time to meet to discuss student goals for the week. (0)

Principal Investigator's Thoughts: If the proper communication supports are in place, then conversations barriers are not an issue. Path-Goal Theory. A utopia of professional conversations.

Participant Details:

Additional Items

- 9 Conferencing after student escalations in behavior to discuss what helped and what could have been done differently. (+3)
- 17 Discussing procedures of how to diffuse escalated situations in student behavior. (+3)
- 21 Open communication among everyone within the classroom. (+3)
- 36 Communication has to be a priority. (+3)
- 23 Everyone in the classroom needs to possess a sincere desire to help students to succeed. (+2)
- 26 Starting the school year with a sharing of students' important information. (+2)
- 34 Providing opportunities to share expectations that team members have for each other. (+2)

Principal Investigator's Thoughts: These are all supports.

Participant Details:

- 23 It must start with people who want to work with/teach students.
- 26 Parapros need to be trusted to know more about IEPS and such.

- 5 There could just be a true dislike of personalities. (-2)
- 6 The hours paraprofessionals are expected to work, hinder their time to be a part of conversations. (-2)
- 25 Often people will avoid conversations they find uncomfortable. (-2)
- 29 You have to reflect, you have to think, and that's something I DON'T like to do. (-2)
- 35 Lack of quality planning time where all classroom paraprofessionals and the teacher are able to converse without student presence. (-2)

Principal Investigator's Thoughts: These are all barriers.

Participant Details:

- 35 I don't feel that in my room there is a lack of planning. My teacher informs us of all expectations and plans as they arise.
- 5 People will vary [in] personalities/opinions. We do not all have to get along but we will have respect for one another.

12 Being understaffed. (-1)

Principal Investigator's Thoughts:

Participant Details:

- 12 I do not feel we are understaffed.
- 12 The number of people in a conversation should not impact its professionalism.

Demographics*:

Participants with non-confounded significant factor loadings >0.60

P-----AM---

T-----AB---

A-----AM---

Additional participants with non-confounded significant factor loadings >0.41

P-----AB---

T-----AB---

Participants with confounded significant factors

P-----AB---

T-----AB---

T-----EB---

Summary of Demographics: Of eight participants with significant factor loadings, there was 1 administrator, 4 teachers, and 3 paraprofessionals. There was 1 male. 1 African-American and 7 White participants. Ages ranged from 21 to 48. 4 elementary and 4 high school. 1 EBD and 7 ASD. 2 Master's degree, 6 Bachelor's degrees. Between 1 and 24 years of experience in education. Between 1 and 10 years with self-contained experience. Between 1 and 7 years with working with current classroom staff.

Principal Investigator's Thoughts: This group all have a least a Bachelor's degree, including the three paraprofessionals. Two of the paraprofessionals are brand new to Education. Their third paraprofessional has a Master's degree.

*Demographic details are redacted here to ensure confidentiality. Remaining demographics include position, program, and degree level.

Factor 4 Crib Sheet**Items Ranked at +4**

36 Communication has to be a priority. (+4)

32 Lack of positive leadership from the teacher. (+4)

Principal Investigator's Thoughts: Communication is a priority. If it is not, then it's the teacher's fault. Teamwork is not present?

Participant Details:

36 If it isn't a priority, the necessity for professional conversations can be overlooked and may not take place.

36 I believe the teacher and paras have to be on the same page as far as behavior plan interventions and how to achieve success. Being a team is very essential and communication is the key.

32 Teacher often sets stage.

Items Ranked Higher in Factor 4 Array than in Other Factor Arrays

24 From day 1, teachers set the tone for how assistants are viewed by the students. (+2)

28 Disagreement on goals or methods to reach goals. (+1)

25 Often people will avoid conversations they find uncomfortable. (0)

Principal Investigator's Thoughts: Teachers carry the responsibility for setting the tone in the classroom.

Disagreements and uncomfortable conversations are more present within this factor.

Participant Details:

24 The teacher sets the tone from day one. Expectations and growth [are] expected daily.

Items Ranked Lower in Factor 4 Array than in Other Factor Arrays

30 Paraprofessionals NEED to be trusted to know more about students' conditions and IEPs, so they can best participate in helping to meet behavioral goals. (-2)

26 Starting the school year with a sharing of students' important information. (-1)

17 Discussing procedures of how to diffuse escalated situations in student behavior. (+2)

Principal Investigator's Thoughts: Less regard of paraprofessionals and providing them with information. What they do need to know is how to de-escalate crisis situations.

Participant Details:

17/9 Establish procedures for and conference after. Both involve conversation and initiative in classroom.

Items Ranked at -4

27 Because of their job title, paraprofessionals are often forced to do things like monitoring students during lunch and breakfast, hallway duty, etc. when teachers are at meetings. (-4)

12 Being understaffed. (-4)

Principal Investigator's Thoughts: Not an issue that paraprofessionals have duties nor being understaffed. Are these primarily administrators?

Participant Details:

27 Duty expectations have no impact on collegial experiences.

27 Paraprofessionals doing duties outside the classroom does not impact any conversations I would have with my paras. I believe that you will find the time in the classroom if it is important.

27 Just because parapos are on their duties that shouldn't negatively impact conversing.

27 Because I believe paras are willing to do what they have to do.

12 Being understaffed doesn't impact a conversation that are or staff.

12 Being understaffed is something a teacher does not have control; however, with less staff I would collaborate whenever I could.

12/6 Does not apply to conversations – more school related excuses.

12 Being understaffed and not liking parts of the job have nothing to do with what HAS to be done.

Items Ranked at 0

7 If the position, whether teacher or paraprofessional, is just filling a job, it will always show through and influence the climate of the classroom. (0)

13 Not having a clear understanding of the teachers' and paraprofessionals' roles and responsibilities. (0)

- 25 Often people will avoid conversations they find uncomfortable. (0)
- 34 Providing opportunities to share expectations that team members have for each other. (0)
- 38 A lack of confidence on the part of a teacher or paraprofessional. (0)
- 40 Poor collaborative skills. (0)

Principal Investigator's Thoughts:

Participant Details:

As you work toward right, statements become more conversation with teacher about student behavior. Far left were outside of classroom, middle was more heading towards classroom interactions with far right about how teacher and para interact.

Additional Items

- 9 Conferencing after student escalations in behavior to discuss what helped and what could have been done differently. (+3)
- 11 The lead teacher plays a vital role in creating a positive climate in their classroom. (+3)
- 19 The relationship between the teachers and paraprofessionals must be viewed by all as a team. (+3)
- 21 Open communication among everyone within the classroom. (+3)
- 1 If problems arise between teachers and paraprofessionals, they need to speak to each other instead of talking to others who are not involved. (+2)
- 14 Talking negatively about another adult in the classroom. (+2)
- 18 The teacher not relaying information to paraprofessionals that is vital to their job performance. (+2)

Principal Investigator's Thoughts:

Participant Details:

- 11 The positive set forth by the teacher is the most important part of setting the tone for the day.
- 14 Lacking the ability to trust one another.
- 9/17 Establish procedures for and conference after. Both involve conversation and initiative in classroom.

- 2 Paraprofessionals would like the opportunity to be a part of PLCs, data meetings, trainings for teachers, etc. (-3)
- 6 The hours paraprofessionals are expected to work, hinder their time to be a part of conversations. (-3)
- 29 You have to reflect, you have to think, and that's something I DON'T like to do. (-3)
- 33 We are so rarely able to voice our opinions in meaningful ways I think we don't know how or when our opinions might be valuable. (-3)
- 8 The principal is the individual with the greatest positional authority, and that individual has an obligation to take the initiative in creating the conditions for productive professional conversations. (-2)
- 20 Movement toward candid conversations. (-2)
- 22 If teachers and paraprofessionals view themselves as lifelong learners. (-2)
- 39 I don't think we do enough training on how to utilize our paraprofessionals to help us meet student goals. (-2)

Principal Investigator's Thoughts:

Participant Details:

- 2 This would definitely be useful in the classroom, but not a huge impact.
- 2 Assistants really don't want to be a part of professional development unless it's specific to autism teaching strategies.
- 22 Important, but not impactful on professional conversations.
- 8 This responsibility exists, but aside from taking that initiative, the other pieces have greater impact or less impact.
- 6/12 Does not apply to conversations – more school related excuses.
- 29 Professional conversation is part of the job regardless.

- 4 Building a support system and a sense of collegiality. (+1)

Participant Details:

- 4 Collegiality will open the door for the “team” to speak more openly.

15 Lack of unity. (+1)

Participant Details:

15 This impacts how comfortable the adults feel with having a professional conversation without judgment.

Demographics*:

Participants with non-confounded significant factor loadings >0.60

A- ----AM- --
 T- ----AB- --
 A- ----AM- --

Additional participants with non-confounded significant factor loadings >0.41

T- ----AB- --
 A- ----AM- --
 A- ----AM- --
 P- ----AH
 T- ----EB- --
 T- ----EB- --

Participants with confounded significant factors

T- ----AM- --
 P- ----AH- --
 T- ----AB- --
 T- ----AB- --
 T- ----AB- --
 T- ----AB- --
 A- ----EM- --

Summary of Demographics: Of 16 participants with significant factor loadings, there were 5 administrators, 9 teachers, and 2 paraprofessionals. There were 4 males. 1 African-American and 15 White participants. Ages ranged from 20 to 62. 9 elementary and 7 high school. 3 EBD and 13 ASD. 6 Master’s degree, 8 Bachelor’s degrees and 2 High School diplomas. Between 1 and 30 years of experience in education. Between 1 and 20 years with self-contained experience. Between 1 and 10 years with working with current classroom staff.

Principal Investigator’s Thoughts: This group has 5 of the 8 administrators in this study. Also, ¼ of participants are male (4 out of 16). This is a group that is found in both elementary and high school and in EBD and ASD settings. The two paraprofessionals have a high school diploma.

*Demographic details are redacted here to ensure confidentiality. Remaining demographics include position, program, and degree level.


Appendix E



Office of Research and Sponsored Programs
 1 UNF Drive
 Jacksonville, FL 32224-2665
 904-620-2455 FAX 904-620-2457
 Equal Opportunity/Equal Access/Affirmative Action Institution

MEMORANDUM

DATE: October 26, 2016

UNF IRB Number: 860203-1 Exemption Date: 10-26-2016 Status Report Due Date: 10-26-2019 Processed on behalf of UNF's IRB 
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TO: Mr. Travis Henderson, M.Ed.

VIA: Dr. Anne Swanson
 Leadership, School Counseling & Sport Management

FROM: Dr. Jennifer Wesely, Chairperson
 On behalf of the UNF Institutional Review Board

RE: Declaration of Exempt Status
 IRB#860203-1: "Professional Conversations Within Self-Contained Classrooms: The Shared Perspectives of Teachers, Paraprofessionals, and Administrators"

Your project "Professional Conversations Within Self-Contained Classrooms: The Shared Perspectives of Teachers, Paraprofessionals, and Administrators," was reviewed on behalf of the UNF Institutional Review Board and declared "[Exempt](#)" [Category 2](#). Although data collected in your study during Phase II will be confidential rather than anonymous (anonymous for Phase I), your project was declared Exempt based on the understanding that any disclosure of participant responses outside of the research will not place participants at risk of criminal or civil liability or be damaging to their financial standing, employability, or reputations. If you obtain information that could put participants at risk, please promptly notify the IRB as this may affect the review type for your project.

Based on the recently revised [Standard Operating Procedures](#) regarding exempt projects, the UNF IRB no longer reviews and approves exempt research according to the [45 CFR 46](#) regulations. Projects declared exempt review are only reviewed to the extent necessary to confirm exempt status. Please contact a research integrity administrator if you have questions about the review type for your project.

Please note: Clay County Schools may require you to obtain approval from the Accountability and Assessment department before you can utilize staff, facilities, students, or data associated with their school district. Please include a copy of this memo when you apply for Clay County Schools' approval. Because your project was declared exempt from further UNF IRB review, you will not be required to submit your Clay County Schools' approval to the UNF IRB. However, you may need to present a copy of the Clay County Schools' approval along with this Declaration of Exempt Status Memo to school principals, teachers, staff and others when you approach them about this research.

Please note: Although you requested signed informed consent, oral informed consent is also acceptable given the very low risk posed by this study. Please also note that the informed consent information presented to potential participants should contain the elements of informed consent listed in the [Informed Consent Checklist](#). Because your project was declared exempt from further UNF IRB review, you will not be required to submit your informed consent document to the UNF IRB. Rather, in good faith the UNF IRB will trust that you will present the informed consent information to all potential participants and obtain their informed consent before asking them to complete your survey.

Once data collection under the exempt status begins, the researchers agree to abide by these requirements:

- All investigators and co-investigators, or those who obtain informed consent, collect data, or have access to identifiable data are trained in the ethical principles and federal, state, and institutional policies governing human subjects research (please see the [FAQs on UNF IRB CITI Training](#) for more information).
- An informed consent process will be used, when necessary, to ensure that participants voluntarily consent to participate in the research and are provided with pertinent information such as identification of the activity as research; a description of the procedures, right to withdraw at any time, risks, and benefits; and contact information for the PI and IRB chair.
- Human subjects will be selected equitably so that the risks and benefits of research are justly distributed.
- The IRB will be informed as soon as practicable but no later than 3 business days from receipt of any complaints from participants regarding risks and benefits of the research.
- The IRB will be informed as soon as practicable but no later than 3 business days from receipt of the complaint of any information and unexpected or adverse events that would increase the risk to the participants and cause the level of review to change. Please use the [Event Report Form](#) to submit information about such events.
- The confidentiality and privacy of the participants and the research data will be maintained appropriately.

While the exempt status is effective for the life of the study, if it is modified, all substantive changes must be submitted to the IRB for prospective review. In some circumstances, changes to the protocol may disqualify the project from exempt status. Revisions in procedures or documents that would change the review level from exempt to expedited or full board review include, but are not limited to, the following:

- New knowledge that increases the risk level;
- Use of methods that do not meet the exempt criteria;
- Surveying or interview children or participating in the activities being observed;
- Change in the way identifiers are recorded so that participants can be identified;
- Addition of an instrument, survey questions, or other change in instrumentation that could pose more than minimal risk;
- Addition of prisoners as research participants;
- Addition of other vulnerable populations;
- Under certain circumstances, addition of a funding source

To submit an amendment, please complete an [Amendment Request Document](#) and submit it along with any updated documents affected by the changes via a new package in IRBNet. If investigators are unsure of whether an amendment needs to be submitted or if they have questions about the amendment review process, they should contact the IRB staff for clarification.

Your study was declared exempt effective 10/26/2016. Please submit an [Exempt Status Report](#) by 10/26/2019 if this project is still active at the end of three years. However, if the project is complete and you would like to

UNF IRB Number: 860203-1 Exemption Date: 10-26-2016 Status Report Due Date: 10-26-2019 Processed on behalf of UNF's IRB
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close the project, please submit a [Closing Report Form](#). This will remove the project from the group of projects subject to an audit. An investigator must close a project when the research no longer meets the definition of human subject research (e.g., data collection is complete and data are de-identified so the researcher does not have the ability to match data to participants) or data collection *and* analysis are complete. If the IRB has not received correspondence at the three-year anniversary, you will be reminded to submit an [Exempt Status Report](#). If no [Exempt Status Report](#) is received from the Principal Investigator within 90 days of the status report due date listed above, then the IRB will close the research file. The closing report or exempt status report will need to be submitted as a new package in IRBNet.

CITI Training for this Project:

Name	CITI Expiration Date
Travis Henderson	7/18/2018
Dr. Anne Swanson	11/16/2018
Dr. Christopher Janson	11/8/2018

All principal investigators, co-investigators, those who obtain informed consent, collect data, or have access to identifiable data must be CITI certified in the protection of human subjects. As you may know, **CITI Course Completion Reports are valid for 3 years**. The CITI training for renewal will become available 90 days before your CITI training expires. Please renew your CITI training when necessary and ensure that all key personnel maintain current CITI training. Individuals can access CITI by following this link: <http://www.citiprogram.org/>. Should you have questions regarding your project or any other IRB issues, please contact the research integrity unit of the Office of Research and Sponsored Programs by emailing IRB@unf.edu or calling (904) 620-2455.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within UNF's records. All records shall be accessible for inspection and copying by authorized representatives of the department or agency at reasonable times and in a reasonable manner. A copy of this memo may also be sent to the dean and/or chair of your department.

UNF IRB Number: 860203-1 Exemption Date: 10-26-2016 Status Report Due Date: 10-26-2019 Processed on behalf of UNF's IRB 
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Vita

Travis Brett Henderson
 Born in Jacksonville, FL.
 Grew up in Hilliard, FL.

Travis Henderson is dual-certified as a Board Certified Behavior Analyst and as a teacher in the State of Florida certified in the areas of Exceptional Student Education (K-12), Elementary Education (K-6), and with the Autism Spectrum Disorder Endorsement. His research focus is on conversations between teachers and paraprofessionals in regards to managing classroom behaviors and how to reduce the barriers that prevent natural collaborative opportunities throughout the school day for teachers and paraprofessionals to learn from each other. His professional interests include increasing students' functional communication skills and training parents and teachers to use behavior strategies within their settings.

Education

University of North Florida

Doctor of Education in Educational Leadership	August 2012 – April 2017
Master of Education in Special Education	August 2008 – December 2009
Bachelor of Science in Psychology	August 2000 – April 2005

University of West Florida

Concurrent Enrollment – Cognate Courses	June 2014 – September 2014
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University of Florida

Autism Endorsement Courses	May 2010 – December 2010
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Work Experiences

School District of Clay County	February 2008 – Present
The Jericho School for Children with Autism	August 2005 – February 2008

Certifications

Board Certified Behavior Analyst	May 2010 - Present
Florida Educator	August 2008 - Present
Exceptional Student Education (K-12)	
Elementary Education (K-6)	
Autism Spectrum Disorder Endorsement	