Teaching and Learning in Communication Sciences & Disorders

Influence of Supervision and Clinical Experiences on Professional Development of Graduate Speech Language Pathology Students

Sarah Rapillard
sarahwrapillard@gmail.com

Laura Plexico
Auburn University, lwp0002@auburn.edu

Allison M. Plumb
Auburn University, amp0016@auburn.edu

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Introduction

With the growing scope of practice within the field of speech-language pathology, it is crucial that students be prepared to serve diverse clients with a myriad of specific clinical needs. A vital element of the instruction of graduate students in speech-language pathology is clinical education. Rose and Best (2005) describe clinical education as the procedure of helping students gain the necessary knowledge, abilities, and outlooks in practical, clinical settings in order to meet the standards required by universities for degree conferral, as well as those of professional accreditation and licensing boards. In order to prepare future speech-language pathologists to become skilled service providers across patient populations, it is vital that students' clinical education consist of well-balanced academic and clinical training that takes the learning styles of the students into consideration.

Learning Styles. A learning style is the "preference or habitual strategy used by an individual to process information for problem solving" (Katz & Heinman, 1991, p. 239). When we think about the education process, we often think about the process in terms of how information is conveyed to the students. The students are often likened to empty containers to be filled with information (Freire, 2000). This process of filling the container is often accomplished through the use of traditional pedagogical methods. Traditional instruction models often include lecturing in the classroom or, with regard to clinical supervision, providing a verbal explanation of how something should be accomplished during supervisory meetings. However, this more traditional and predominant delivery method for instruction can be problematic for some learners. When a learner hears a lecture or verbal explanation, he or she becomes a passive participant in the learning process. Further, this traditional pedagogical method fails to incorporate the role of experience in the learning process (Manolis, Burns, Assudani, & Chinta, 2013). Another problematic part of the process for clinical training environments is that the learning spaces provided in the classroom and clinic are not always in synchrony, sometimes making it difficult for the student to bridge the gap between the two environments. Transformational learning, which recognized the importance of experiential learning as well as differing learning styles, is now recognized as a more effective pedagogical approach (Jacoby, 1996; Manolis et al., 2013).

A widely recognized learning style model is Kolb's Experiential Learning Model (1984). Kolb's model is used to better understand how students learn experientially, which has roots in the concept of self-efficacy. Kolb's model reflects how learning is a holistic and transformational process whereby knowledge is created through experience. His model is based on four learning modes: concrete experience (CE), reflective observation (RO), abstract conceptualization (AC), and active experimentation (AE). These four modes of learning occur across two dimensions: perceiving and processing. Perceivers emphasize abstract over concrete, whereas processors emphasize action over reflection. A combination of the two independent dimensions results in four different learning styles: diverging (CE/RO), assimilating (AC/RO), converging (CE/AE), and accommodating (CE/AE).

Learning style differences have been widely researched with agreement that learners do develop individual preferences toward approaches with which they learn (Entwistle & Waterston, 1988; Honey & Mumford, 1986; Kolb, 1984; Speth & Brown, 1988). An understanding of learning styles is important for both academic and clinical faculty in Communication Disorders programs as the

research supports that learning outcomes will be more successfully met when an instructor is able to match his or her pedagogical methods to a student's learning style (Svinicki & Dixon, 1987; Vittetoe & Hooker, 1983). While helping to optimize learning outcomes by adapting to individual students' learning styles, it is equally important to consider that students who are able to master a variety of learning styles are likely to better acclimate to different learning situations (Dixon, 1985). In an ever-expanding field, such as speech-language pathology, an understanding of learning styles may allow faculty to encourage students to adjust their particular styles to suit the demands of novel clinical situations in which they find themselves. It is important, therefore, that faculty are able to both teach to a student's learning style while also encouraging him or her to grow in other learning styles simultaneously.

Within experiential learning theory (ELT) is Kolb's concept of a learning space (1984). A learning space is used to explain the complex and dynamic nature of one's learning style and its creation through interactions between people and their environment. In addition to a mismatch between learning styles and methods of instruction, additional difficulty is often exhibited when bridging the gap between the classroom and clinic. The nature of clinical training involves "hands on" experience and a process of demonstration-practice-production, while learning within the classroom setting has the potential to be very text driven. When this is the case, students are being asked to occupy two different learning spaces: telling vs. showing. This mismatch has the potential to create difficulties applying what is learned in academic courses to the clinical setting.

Learning Styles of Speech-Language Pathology Students. Limited study has been done on the learning styles of speech-language pathology students. McLeod, Lincon, McAllister, Maloney, Purcell, and Eadie (1995) administered Honey and Mumford's Learning Styles Questionnaire (1986) to three groups of speech-language pathology students over a two-year period. Results indicated that speech-language pathology students were more often reflectors and activists. Reflectors learn by listening, observing, and reflecting, while activists learn best though experience and active experimentation. If compared to Kolb's work (1984), these would be in line with AE and RO learning models. These findings were consistent with the reported learning styles of students in other health professions (Lovie-Kitchin, Coonan, Sanderson, & Thompson, 1989). Interestingly, over two years there was an increase in the number of activists, indicating that learning styles evolved during their training.

Brown, Cosgriff, and French (2008) compared the learning styles of first year students in occupational therapy, physical therapy, and speech-language pathology using the Kolb Learning Style Inventory (LSI; Kolb, 1976) and VARK Questionnaire (Fleming, 2001) during the first semester of their first year of study. All three groups preferred kinesthetic learning, supporting the use of practical application and case study as a component of clinical education. While all three groups preferred practical application as a whole, it should be noted that all four of Kolb's information processing styles were represented in each group, indicating a need for educators to use a range of teaching styles to accommodate the heterogeneity of student learning styles in allied health sciences.

Method of Instruction. Despite agreement that students develop preferences for learning styles and that speech-language pathology students have a distinct pattern of learning preferences, which can evolve over time, there is a dearth of evidence as to how speech-language pathology students are actually being instructed. Hadley and Fulcomer (2010) investigated models of instruction through an electronic survey of 70 program chairs in speech-language pathology. The models queried were based on Joyce, Weil, and Calhoun's (2000) work, which categorized the major models of instruction into families: the social family, the information processing family, the personal family, and the behavior systems family. They selected specific models from the social, information-processing, and behavioral families due to their documented use in higher education. The social family emphasizes group work and includes both role play and cooperative learning. In role play, the students solve problems through defining the problem, acting out a given situation, and then discussing the results. In cooperative learning, students work together on a common activity and are rewarded for their performance as a group (Bruce et al., 2000). Information-processing models help students learn through the organization of information. This family includes memory strategy instruction, induction, and problem-based learning. In memory strategy instruction, the instructor facilitates learning by incorporating strategies, such as mnemonic devices and rehearsal, in order to assist with information recall. In problem-based learning, students work in teams to solve problems. In the case of speech-language pathology, this can be cases or clinical scenarios. The instructor is not the sole-source of information, rather the facilitator of the exchange of information (Gunter, Estes, & Mintz, 2007). In induction, students learn and form concepts through investigation, logic, and reasoning. This may include the teaching of thinking skills and activities that require the students to learn and then apply concepts to practical situations (Gunter et al., 2007). Finally, the behavioral model is based on behavioral learning theories. It is most often associated with a lecture and discussion format and includes direct instruction in which the information is broken down into small increments and presented in a prescribed order (Magliaro, Lockee, & Burton, 2005). Results indicated that problem-based learning and induction were used most frequently, followed by direct instruction, cooperative learning, memory strategy instruction and role-play, which were used less frequently. The findings show that none of the models were being used exclusively and that a variety of models were being incorporated into graduate-level communication disorder programs.

Clinical Learning. Promotion of clinical problem solving and critical thinking skills in student clinicians is a complex process, and, if understood by academic and clinical educators, could assist in meeting graduate students' developmental needs and help promote optimal student growth. Moses and Shapiro (1996) suggest that there are several developmental factors that affect the supervisees' ability to problem solve and include: age, experience level, and information provided by supervisors. Shapiro and Moses (1989) discuss a nine stage problem-solving taxonomy that progresses from identifying a clinical problem from a self-centered perspective to constructing a theory of causality based upon reflection. The stages include: identification, disequilibrium, reflection, exploration, solidification, negotiation, modification of perspective, evaluation, and construction. A supervisee should progress through these stages to become a successful critical thinker in the role of a clinician (Shapiro & Moses, 1989).

The Supervision Process. Integral to the clinical training of graduate students in speech-language pathology is clinical supervision. ASHA (1985) defines clinical supervision as, "the tasks and skills of clinical teaching related to the interaction between a clinician and client," (Introduction

section, para. 3). To be a successful supervisor, ethical and unethical practices in speech-language pathology, as well as clinical competencies required of supervisors must be taken into consideration (ASHA, 2010r; ASHA, 1985). The completion of various supervisory tasks, whether successful or unsuccessful, influences the students' perception of the process as well as their overall clinical experiences and development as professionals.

According to ASHA, supervisors are required to support a working relationship with their supervisee that involves assisting the student in clinical problem solving as well as independent thinking skills (ASHA, 1985). According to McCrea and Brasseur (2003), there are five components of the supervisory process that assist in the successful completion of the tasks required of supervisors by ASHA. The supervisors must understand the supervisory process, plan the supervisory experience, observe the student throughout the process, analyze his/her observations of the process, and integrate. The final process of integration occurs when all parts of the supervisory process come together to provide feedback to the clinician, which assists the supervisee in making the best clinical decisions for his or her clients. To be a successful supervisor, all five of the components must consolidate to form a teachable situation. This situation typically occurs during regularly scheduled conferences that allow for feedback on clinical practices. These meetings also facilitate professional growth through observation of the professional interaction style of the supervisor (McCrea & Brasseur, 2003).

Supervisee Needs. In addition to considering the components of the supervisory process in and of itself, it is equally important to consider the specific needs of the student(s) receiving clinical supervision. Dowling and Wittkopp (1982) identified several needs of the supervisee during the clinical supervision process. At the beginning of clinical education, more guidance is perceived to be necessary when developing lesson plans, diagnosing clients, and treating clients. Increased supervision was also perceived as helpful. Progression through a graduate program seemed to require less structure from clinical supervisors including more responsibility and less supervision.

In an exploratory phenomenological study of graduate students in speech-language pathology, Ensslen (2013) found that students responded positively to supervisors who were encouraging, approachable, and personable. Constructive and focused feedback (delivered tactfully) were valued by students, as was collaboration to solve clinical problems. Clearly stated expectations were also noted as helpful, as well the ability to provide models for students as they are learning. With regard to least helpful supervisor characteristics, the students stated certain traits converse to those above (i.e., unapproachability, feedback that is critical as opposed to constructive) as well as other traits, such as inflexibility/rigidity, and impatience.

Larson (1981) conducted a study evaluating supervisory needs and expectations of graduate clinicians in speech-language pathology and audiology. Results indicated that two factors influence supervisor-supervisee interactions: supervisee-focused expectations and supervisor-controlled expectations. Supervisee-focused expectations are those that are centered on the student clinician's need to have an active role in the supervisor-supervisee interactions. Supervisor-controlled expectations, on the other hand, are those that assume that the supervisor assumes the active role in the supervisor-supervisee interactions. More experienced clinicians were found to expect a more active role in the supervisory process, while needing supervisors to assume a supportive and attentive role. Inexperienced clinicians were found to need supervisors to provide

them with information regarding their weaknesses. Both groups stated that they needed to be able to express themselves regarding their clinical practice (Larson, 1981).

Purpose. This paper is derived from a larger study with the primary purpose of understanding and describing the ways in which graduate students' academic and clinical experiences impact clinical development. To accomplish this goal and develop this understanding, qualitative methods were used to analyze the clinical and academic experience of millennial speech-language pathology graduate students. A qualitative research paradigm can provide a naturalistic representation of a student's experiences. This representation allows for theory to develop on its own without expectations (Patton, 2015). The specific goals of this study were to:

(1) develop an understanding of the millennial graduate speech-language pathology students' academic and clinical experiences

(2) develop an understanding of how supervisory and clinical experiences influenced students' perception of their training and development

Method

The participants included in this study, as well as the methods used for interviewing the students, data analysis, and credibility are identical to the methods used in the companion manuscript (Rapillard, Pexico & Plump. 2019). A qualitative research paradigm was chosen to enable the investigators to most accurately represent the phenomenon at hand using the personal experiences of those faced with the stated topic (Patton, 2015).

Research Participants. The participants included in this study met the following criteria: (1) were able to complete the required questionnaire, (2) able to adequately communicate about their graduate training experiences, and (3) willing to fully share their experiences about the phenomenon being explored. The participants also had to be graduate students entering a graduate training program in speech-language pathology, over 19 years of age, literate, and monolingual, English speakers. Participants of the current study included eight females who were diverse in their undergraduate training experience, previous clinical experience, and age. Previous clinical experience ranged from having no experience, to having only completed ASHA's mandatory 25 observation hours to having previous hands-on treatment experience. The participants were between the ages of 21 and 28 ($M = 22.37$, $SD = 2.39$) at the time of their initial interview (see Table 1). Seven of the participants received their bachelor's degrees in communication disorders, while one received a bachelor's degree that was in an undeclared major.

Interview. The second author, who received training in qualitative interviewing, conducted the interviews analyzed for this study. Interviews were conducted at the beginning of each semester of graduate training and following the final semester of graduate training. This resulted in six interviews per participant. Four participants were unable to return for the final interview resulting in 44 interviews total. Standard administration guidelines as well as an interview guide containing four categories of open-ended questions were used during each interview. The four categories covered included: general information, clinical questions, academic questions, and supervision questions. Unplanned prompts on topics that required additional elaboration were used when clarification was needed (see Appendix for interview guide). Following each interview, the

participants were asked credibility questions to check the researcher's influence on the interview process and to make sure data was thoroughly gathered.

Table 1: Demographic Information

Pseudonym	Age	Race	Sex	BCD	Hours Clinical Experience	Type Clinical Experience
Kelly	28	W	F	No	25	Observation
Heather	21	W	F	Yes	2.5	Treatment
Julie	23	W	F	Yes	0	None
Ann	22	W	F	Yes	>50	Treatment
Mary	21	W	F	Yes	6	Treatment
Susan	21	W	F	Yes	24	Treatment
Maria	22	W	F	Yes	5.5	Treatment
Debra	21	W	F	Yes	4.5	Treatment

BCD (Bachelors communication disorders)

Analysis. The transcribed interviews served as the data source for this study. Pseudonyms were randomly assigned following analysis of the transcribed interviews. Grounded theory was used for data analysis due to the relatively unexplored nature of the phenomena of interest (Glaser & Strauss, 1967). Grounded theory analysis consists of open-coding categorization and axial coding into a paradigm. Data acquisition and analysis continued until saturation of information was complete. Saturation was achieved when two participants did not contribute any new themes that would be necessary for understanding the phenomenon of interest (Glaser & Strauss, 1967). Qualitative Solutions and Research (QSR-N4) software was used to analyze the data and facilitate the process of organizing it into a hierarchy of categories (NVivo 10, 2014).

Credibility. To increase the credibility of the findings, several procedures were followed. First, all interviews were recorded with a high quality digital recorder PMD671 Marantz digital recorder (Marantz America, LLC, New Jersey) and transcribed verbatim for analyses. Second, biases were identified prior to the interviews and were reviewed throughout the data analysis process. Memos were kept to track the ways in which theory emerged from the data and further evolved. Finally, investigator triangulation was used to incorporate views from multiple sources (Creswell, 2007). The constant comparative method was used to seek consensus between investigators (Patton, 2015).

Results

The 44 interviews were broken down into 3,792 meaning units, which comprised the lowest layer of the hierarchy. Results of investigator triangulation indicated 90% reliability between investigators in the determination of the meaning units. The hierarchy contained six layers and included 3,814 meaning units. The overall hierarchy contained more meaning units because the meaning units could be placed into more than one subcategory. The "core category" is the highest layer of the hierarchy and contains five "clusters," which form the second layer of the hierarchy. Each cluster contains categories, which in turn consist of subcategories. Several subcategories also

consist of themes. Two clusters describing student learning styles and coping are addressed in a previous companion article (Rapillard, et al., 2019). These clusters focused on how millennial students approached the experiential learning process, how self-regulated they were in that process and the strategies used to cope with the stress associated with graduate school and clinical development. As indicated previously, the following article will describe the remaining three clusters along with each of their categories, subcategories, and themes that address the influences of academic coursework, the overall clinical learning experience, and the supervision process on clinical development in speech-language pathology graduate students.

Cluster 1: Academic coursework is a foundational and overwhelming aspect of graduate training that cannot fully prepare a student clinician for all clinical problems, thus indicating the need for academic faculty to provide connections, a foundational framework to build from, as well as advice to students. All participants (N=8) endorsed this cluster resulting in four categories that describe the influence of academic experiences on a student's training experience. This cluster resulted in descriptions of difficulties experienced by the students as they progressed through their academic coursework. The students were predominantly extrinsically motivated and struggled with the disconnect between academic and clinic experiences and that academic experiences did not always match their preferred learning experience. See Tables 2, 3, and 4 for an overview of the cluster, category, and subcategory descriptions. The four categories are described below along with their subcategories.

Table 2: Cluster 1, Category, Subcategory Information

Cluster 1: Academic coursework is a foundational and overwhelming aspect of graduate training that cannot fully prepare a student clinician for all clinical problems, thus indicating the need for academic faculty to provide connections, a foundational framework to build from, as well as advice to students			
Categories	n	Subcategories	n
1. Overall experience	8	A: Overwhelming nature	6
		B: Helpful, positive, & enjoyable	7
2. Role of academic coursework	8		
3. Students' expectations of faculty	8		
4. Clinical preparation	7		

Category 1: Academic coursework is experienced as an overwhelming process; however, it is found to be helpful, increases a student clinician's comfort level, and is an overall positive experience (1-1). All participants (N=8) endorsed this category resulting in the emergence of two subcategories. The subcategories focus on the difficulties experienced by the students as well as the helpful nature of academic coursework.

Overwhelming nature of academic coursework. The students found academic coursework to be overwhelming and difficult to complete when also assigned clinical coursework *(1-1A; n = 6)*. The overwhelming experience of academic coursework prompted some students to focus on survival, rather than success. For example, when asked about her academic needs, Kelly stated that she just needed to "survive." Students also felt that the amount of information provided to them was vast and overwhelming. Maria stated, "Like I said we get a lot of information, and I don't think it's humanly possible to actually remember all of it." This trend was seen throughout the graduate training experience.

Many participants also experienced difficulties managing both academic and clinical coursework and could not find a workload balance. Some participants felt as if they had to choose which part of their graduate training would receive more attention, academic or clinical. Some participants, like Ann, felt as if they were less prepared for clients when putting forth extra effort into academic coursework. She stated, "I could've wish that I'd learned more, because I don't know that I would feel as prepared for therapy in those kind of areas as I would like." This lack of balance increased stress levels and caused some students to feel they were not able to fully grasp all information presented to them to the extent that they desired. That is, the students felt that they were not always attending to each aspect of graduate training with equal amount of attention, and this discrepancy left an unsettling feeling.

Helpful, positive and enjoyable academic coursework. Overall, students found academic coursework to be generally helpful, positive, and enjoyable (1-1B; n = 7). Participants found that academic coursework was helpful, despite the challenging nature of managing both. Participants found academic coursework to be a helpful preparation aid for class-specific and exit exams as well as with clinical decision-making. For example, Kelly stated, "Overall, they've [academic courses] been really great and very helpful." General enjoyment of academic coursework was documented throughout graduate training. For example, Heather stated, "The classes are really interesting. I've enjoyed the variety of classes that we've had." Aspects of coursework that participants specifically mentioned as being enjoyable included the variety of coursework and the clinically relevant information provided by professors.

Category 2: Academic coursework plays a large, foundational role in the training of a clinician; however, application to clinical problems proves to be difficult (1-2). All participants (N=8) endorsed this category. The focus of this category was on the general role academic coursework plays in graduate training as well as the application of academic coursework to clinical problems. Debra stated, "I think they [academic courses] play a big role because it's the foundation we're—at this point—basing our therapy process on." All participants agreed with this statement, and this trend continued throughout graduate training. All eight participants found that application of academic coursework was a necessary aspect of graduate training. When discussing application of academic coursework to clinical coursework, Julie stated, "That's how you're going to have a better understanding of what it is that you're doing." Application was also found to be a difficult task when beginning graduate training, but began to decrease in difficulty as graduate training continued. Difficulties were seen when coursework wasn't explicitly clinically applicable to a client at the time they were taking the coursework or when the coursework was more theoretical in nature.

Category 3: Students expect academic faculty to provide connections between academic coursework and clinical work, to provide advice to students, as well as to provide a framework for diagnosis and treatment of communication disorders (1-3). All participants (N=8) endorsed this category. Many specific expectations were discussed; most specifically, the academic faculty was expected to provide connections between academic and clinical work. Expectations provided by the participants included using clinical examples during class or allowing students time to ask questions about current clients that they were providing services to in the university clinic or at an internship setting. Another expectation was for the academic faculty to provide clinical and professional advice to the students. Students also expressed a desire for faculty to provide a framework for the diagnosis and treatment of communication disorders. When asked about her expectations for the academic faculty during her second semester of graduate training, Debra stated, "Just to continue to provide information that's going to be useful. As far as…this is the therapy process and this is the diagnostic process for whatever we're taking." The students clearly wanted a more prescriptive and rule based approach to the clinical decision making process and struggled with some of the ambiguities that come with applying the knowledge learned in class to a diverse group of clients.

Category 4: Academic coursework cannot fully prepare a clinician for all future clinical problems (1-4). Seven participants (*n*=7) endorsed this category. When asked if academic coursework would be able to fully prepare each clinician, the participants repeatedly denied the ability of the coursework to do so. Maria stated:

> Think about how many individual unique cases there are, and – or like rare disorders that you know, maybe some of y'all have never even experienced or seen. I think classes are important to give you like, um…the overall, but what you will encounter the most. Hopefully if you encounter something that's a rare unique disorder, you can take from everything else you learned and try to piece together and like, somehow figure out what might work for this person.

Seven participants made similar statements. It was acknowledged that academic coursework could not fully prepare the student clinician, and that continued throughout graduate training. Acknowledgement and an understanding that academic coursework could not fully prepare them for all clinical encounters may have forced students to use and develop their critical thinking skills.

Cluster 2: Despite challenges faced by students completing a graduate-level program, all participants experienced clinical growth, which is due to increased clinical learning experience and flexibility that occurred during training. All participants (N=8) endorsed this cluster resulting in five categories describing the challenges experienced by the participants. This cluster resulted from descriptions of the influence of orientation, challenges experienced, clinical learning, factors of effectiveness, and general enjoyment of the process. See Table 3 for an overview of the cluster, categories, and subcategories. The five categories are described in detail below.

Table 3: Cluster 2, Category, Subcategory Information

Cluster 2: Despite challenges faced by students completing a graduate-level program, all participants experienced clinical growth, which is due to increased clinical learning experience and flexibility that occurred during training			
1. Orientation and clinic culture	4		
2. Challenges throughout training	8		
3. Clinical learning	8	A: Conducting evaluations versus therapy	8
		B: Procedural nature of clinic	6
		C. Successful therapeutic outcomes	8
		D. Therapy session preparation	8
4. Clinical effectiveness	8		
5. Overall enjoyable experience	8		

Category 1: Orientation is an important foundational aspect of beginning clinical training that provides an overview of the culture of clinic (2-1). Four participants (*n*=4) endorsed this category finding orientation to be a helpful aide when beginning graduate training. Appropriately, students at the beginning of graduate training primarily addressed this topic. Susan stated, "I mean, I had forgotten a lot, since even last semester. So, I mean I think review, and then training, a quick training session's definitely helpful." Graduate students are typically not aware of the experiences that will occur during graduate training. The students found that orientation provided a foundation for their graduate school expectations and allowed them to experience comfort regarding the structure of the program and procedural expectations.

Category 2: Challenges were experienced throughout graduate training and transitioned from an overall therapeutic ability focus to challenges involving specific difficulties experienced (2-2). All participants (N=8) endorsed this category. All participants experienced multiple challenges during graduate training that changed in nature as training progressed. At the beginning of graduate training, many challenges were identified as general therapeutic ability and logistical concerns. Formal assessment procedures, therapy session procedures, and the naturalness of conducting a therapy session were all identified as areas of challenge prior to beginning graduate training. As training progressed, challenges became more specific and client-centered. For example, Debra found that adjusting her expectations was a specific challenge for her. She stated, "Knowing that my expectations for him would have to be different… was definitely a challenge." She was less concerned with her ability to perform therapy in general, as

she was concerned with her ability to tailor her session to her specific client. Self-awareness of the specific challenges that were not based on procedures and/or general conduct of the therapy sessions was noted. They also expressed the desire to use challenges experienced as a means to grow as a clinician.

Category 3: Clinical learning encompasses all aspects of graduate training and increases the clinician's ability to conduct therapy sessions comfortably and effectively (2-3). All participants (N=8) endorsed this category, which resulted in four subcategories. These subcategories covered many aspects of the graduate students' clinical learning opportunities and included: comfort with treatment versus evaluation, comfort and understanding of clinical procedures, what constitutes successful therapeutic outcomes, as well as the logistics of a therapy session preparation.

Conducting evaluations versus performing therapy. Prior to beginning graduate training, many participants identified evaluations to cause many feelings of uneasiness (2-3A, N= 8). Maria stated:

> Um…evaluations, that was, it's funny you ask, because that last week, was like, I was fine all day during orientation on Monday, and then they read out who was doing evaluations, and I think I just hit like my, like, I was just like, "Oh my gosh." Because it was just…we've never learned about evaluations, and that was the one thing like, I was like, had no idea about. And they were just throwing more and more, this is what you have to fill out, this is what you have to do, and that kind of put me over the edge as far as, "Wow, like, I don't know if I can handle this."

Many participants agreed that evaluations were most difficult due to the lack of familiarity with the many procedures required to complete a formal evaluation when beginning graduate school; however, after completion of some clinical experience both aspects of clinic were identified as feasible and less stressful. Some students eventually identified evaluations to be more enjoyable than the completion of therapy sessions. When asked which aspect of clinic she liked more, Ann stated, "I like them [evaluations] better. They're more fun to me." By the end of graduate training, three students concurred. The students who enjoyed completing evaluations more than providing treatment found that they enjoyed the structured nature of diagnostics and found therapy to be less predictable in nature.

Procedural nature of clinic. Clinical procedures was also an aspect of graduate training that required time to learn (2-3B, *n* = 6). This was recognized throughout all of graduate training and across all off-campus clinical placement sites. Though, Kelly found adjustment to the procedural nature of each placement to increase her ability to focus on her clients. She stated:

> Just because of the experience of the procedures and going through, you know, how to file paperwork, deal with paperwork. That kind of procedural stuff was a lot easier, and so it was…I was able to focus more on the client, and not just what I'm doing but what…what are they doing.

Successful therapeutic outcomes. Successful therapeutic outcomes were found to be a result of many intertwined factors (2-3C, N = 8). Client environmental factors, the clinician's ability to be

flexible, therapeutic methods, therapy session preparation, client-clinician rapport, and the therapist's skills were related to successful therapeutic outcomes at the beginning of graduate training. Students identified environmental factors as events that occurred earlier in the client's day or consistency of attendance. When discussing the importance of flexibility, Mary stated:

> If you go into it, and the child or the adult or whatever is not responding to whatever you're doin', be able to have a plan B, and switch to something quicker. That way, the client doesn't get bored or frustrated that way you can, see some sort of progress.

Therapeutic methods were also found to be a predictor of therapeutic success. Understanding of evidence-based practice as well as the ability to independently select goals were identified as contributors to the perception of successful outcomes. For example, Ann stated, "Well, it seems like you have to have a good target to work on." Effort during preparation as well as rapport with the client and his or her family were also thought to predict the success of therapeutic outcomes. Finally, the therapist's skills were identified as anticipators of success during therapy. Their ability to make clinical decisions, manage time during the session, as well as their enthusiasm and creativity were mentioned as skills that were important for clinicians to possess. Maria stated, for example, "You need to be enthusiastic and creative." Application of academic coursework and client motivation were discussed as a predictor after clinical experience was obtained.

Therapy session preparation. The difficulty of therapy session preparation decreases as graduate training progresses, which includes the amount of time required, and increases with the clinician's comfort level (2-3D, N = 8). After the first semester of graduate training, students began to experience a decrease in required preparation time as well as a decrease in difficulty of preparation prior to each therapy session. This trend continued throughout graduate training and across all off-campus clinical placement settings. After the fifth semester of graduate training Heather stated:

> I don't like [take], a whole day to prepare for what I'm gonna do you know—I mean at the beginning you just don't know what's available and you're just not as sure, so it takes a long time, but I think it's – I mean, for however many years we've been doing it, you just get more comfortable and you know…you have things you can fall back on if you don't have anything—you know, you can—you can come up with things a lot quicker.

Each student was asked how much preparation time they needed during each interview. The numbers they provided were averaged to find the amount of time they needed to prepare. During their second semester of training, the participants needed an average of an hour and a half to prepare for their clients, a major decrease from the two and a half hours needed the previous semester. During their third and fourth semesters the amount of time that the students needed decreased to an average of fifteen minutes during the third semester and 6.5 minutes of preparation time during the fourth semester. Once the students completed their first semester of graduate training, preparation was noted to be an easier task to complete, which continued throughout graduate training. Preparation was particularly noted as an easier task once the clinician identified the clients' goals.

Students indicated that they struggled with the fact that they could not be completely prepared for their off-campus clinical work which resulted in feelings of unpreparedness and increased stress.

Maria stated, "I like to have everything lined up and prepared and perfectly and plan out what I'm gonna say and do. And I didn't have time to do that. And that kind of got me flustered at times." At this point, time available and expectations for preparation are different than previously experienced within the university clinical setting. For example, when working in the university clinic, client arrival times may be variable; however, if the student is working in school or health care settings, clients may attend speech therapy back-to-back resulting in less preparation time. The participants also indicated that finding a routine within therapy sessions and preparation of materials, as well as developing a familiarity with goals and objectives, lessened preparation time. When asked what contributed to her decreasing amount of preparation time required, Kelly stated, "Um, I think just kinda getting into a routine and being able to even just use materials over again for a different client. You know, just kinda helps be more efficient in managing my time before a session." The other participants made similar statements regarding the importance of routine in therapy session preparation.

Category 4: Many factors contribute to the effectiveness of a clinician, which may not be realized by the student until graduate training has progressed (2-4). All participants (N=8) endorsed this category. Towards the beginning of graduate training, students seemed to either not be able to identify the causes of treatment effectiveness or found that what they were doing with clients was ineffective. This led to acting without methodology during treatment and decreased the likelihood of the use of evidence-based practice, which is a foundation of the profession. Mary felt as if she was able to be an effective clinician if she could model her supervisor's clinical actions. After the first semester of graduate training was complete, Mary stated:

> I can go in there but I, I don't feel like I would be as effective if I didn't have [supervisor models]… Or even just in the supervisor meetings, saying this is how I would've done it, or this is how we've done it in the past. I wanna be effective and I feel like by having that example it helps me to be more effective and even then I can kind of come up with different ways to do things.

Ann was unable to find specific activities more effective than others for at least one of her clients. For example, Ann specifically stated, "I never knew what I was doing." However, once training progressed, the students described how they were able to better adapt to the client's specific needs as well as identify client strengths and weaknesses. With increased experience, the participants came to the realization of what they found to be effective when working with clients so that client progress could occur. It was during the end of the second semester of graduate training that students began to recognize progress in their clients' performance, and this trend continued throughout graduate training. Despite providing treatment to clients for two semesters, the majority of participants were not able to meaningfully describe client progress until after completion of their third semester of graduate training.

Category 5: In general, the graduate students enjoyed clinical experiences, clinical training, supervisor and faculty interactions, and the independence they were provided while in the role of clinician (2-5). All participants (N=8) endorsed this category, which resulted in many statements of enjoyable activities, and experiences that were provided by their graduate training. Enjoyable clinical experiences were found throughout graduate training. Susan stated, "It's been very enjoyable," when referring to her experiences with clinical work. These experiences range

from direct clinical experiences within the university clinic and across varying clinical placement settings to supervisor feedback and overall clinical training enjoyment. Enjoyment of general clinical work as well as the independence provided by clinical supervisors with various clients appeared to provide students with the motivation to complete other aspects of training.

Table 4: Cluster 3, Category, Subcategory Information

Cluster 3: Despite the negative supervisory experiences that some graduate students overcame, many positive experiences occurred increasing the student's ability to be flexible when working with different professionals' working styles and expectations			
1. Expectations of supervisors	8	A. Learning of expectations	7
		B. Supervisor expectations	8
		C. Student expectations of supervisor	7
2. Supervisory styles	8	A. Adjustment to multiple styles	8
		B. Supervisor feedback	8
		C. Guidance	8
3. Supervisory behaviors	8	A. Helpful behaviors	8
		B. Unhelpful behaviors	8
		C. Communication with supervisors	8
4. Personal conflicts	8		

Cluster 3: Despite the negative supervisory experiences that some graduate students overcame, many positive experiences occurred increasing the student's ability to be flexible when working with different professionals' working styles and expectations. All participants (N=8) endorsed this cluster resulting in four categories describing different aspects of the graduate students' supervisory experience. This experience covers negative and positive supervisor interactions, perceptions of helpfulness, personal conflict, overall supervisory styles experienced, and expectations of the student as well as the supervisor. See Table 4 for an overview of the cluster, categories, and subcategories.

Category 1: Supervisor expectations were not explicitly stated to students and increased as graduate training progressed; however, these expectations were found to be reasonable (3-1). All participants (N=8) endorsed this category resulting in three subcategories. Students discussed their supervisor's clinical expectations throughout graduate training. This included how they came to know their supervisor's expectations and how appropriate these expectations were felt to be considering their experience level. The majority of students felt that their supervisors' expectations were reasonable; however, they were not explicitly told these expectations by their

supervisors. This unawareness provided the students with feelings of uneasiness that decreased as graduate training and clinical experience with their supervisors progressed.

Learning supervisor expectations. The majority of graduate students did not directly learn of their supervisor's expectations throughout graduate training (3-1A, *n* = 7). When learning of the supervisors' expectations, students found that they had to use experience with the supervisor as well as past experiences with different supervisors to decide what their supervisor's expectations would be. They were not explicitly told what the supervisor expected of their performance throughout the semester. For example, Mary stated, "I mean, there was no talk of "This is what I expect of you."" This lack of information was not found to negatively affect the students' experience. This trend continued throughout graduate training. Realization of supervisor expectations was found to improve the students' relationship with their supervisor since they now had a benchmark of where their performance should be.

Supervisor expectations. Supervisors' expectations were initially perceived as high, but reasonable, when beginning graduate training and increased throughout semesters (3-1B, N = 8). Prior to the first semester of graduate training, participants discussed how they were under the impression that their supervisor's expectations were high, however appropriate. When discussing the high nature of initial supervisor expectations, Maria stated, "I think in the end that just forces you to be better." In later semesters, students continued to discuss the increase of supervisor expectations as clinical experience progressed. This increase in supervisor expectations was not met with opposition from the students. They adapted to the changes and felt as if they were equipped to meet expectations.

Overall, supervisor expectations were perceived to be reasonable. Students discussed this beginning the first semester of graduate training and continued throughout their experience. Julie concurred when asked if she felt like her supervisor's expectations were reasonable. She stated, "I think so. I don't think there was anything unreasonable about anything I did." The actions she completed were those expected from her supervisor. Two participants found that their supervisor's expectations were sometimes unreasonable. For example, one did not feel like the expectation to create brand new therapy materials each session was reasonable, and the other student did not go into detail about her supervisor's unreasonable expectations.

Student expectations of supervisor. Graduate students' expectations of their supervisors decreased with experience (3-1C, *n* = 7). Graduate students were found to have high expectations beginning graduate training. Types that were found to occur included: expectations to receive feedback, guidance, and communication from supervisors. These expectations decreased in importance as graduate training and clinical experience progressed. Many participants mentioned the need for supervisors to provide strong support when making clinical decisions, providing modeling of treatment to clients, and performing assessments when beginning graduate training; however, as training progressed, students found that they expected general input from their supervisors rather than the high levels of support mentioned earlier. For example, after the fourth semester of graduate training, Mary stated, "But they weren't as…I didn't expect as much from them as I have in the past, I don't think." The other participants made similar statements while progressing through clinical training.

Category 2: Multiple supervisory styles were experienced during graduate training, which affected feedback, level of guidance, and independence provided, as well as the supervisor's expectations (3-2). All participants (N=8) endorsed this category. This resulted in three subcategories that included discussions about the participants' experiences with adjustment to differing supervisory styles, supervisor feedback, levels of guidance provided, levels of independence provided, the importance of supervisor meetings, and the influence of direct observation of therapy by the supervisor.

Adjustment to multiple supervisory styles. Students were required to adjust to differing supervisory styles throughout all of graduate training (3-2A, N = 8)*.* Differences in supervision style varied among supervisors and appeared to assist students in developing clinical abilities due to its similarity with future professional working conditions. For example, Heather stated, "You kind of have to adjust to different supervisors, but I guess that's how it will be in the real world." Supervisors were also found to be good models of different styles and approaches to being a speech-language pathologist. They discussed the impact that their supervisors' behaviors had on them and how they could use that as a model for how they would or would not perform as a clinician professionally in the future.

Supervisor feedback. Feedback preferences were found to be immediate verbal or written feedback, including positive comments, with the importance of the feedback declining as semesters progressed (3-2B, N = 8). All participants agreed that feedback was necessary for clinical development of therapeutic skills; however, the manner of feedback differed slightly between students. The amount of feedback provided by supervisors was also found to be adequate; however, it decreased in necessity as graduate training progressed. Supervisors were thought to provide an adequate amount of feedback to their students. Participants stated that feedback became less necessary as the semesters progressed, beginning after the second semester of graduate training. After her second semester of clinical experience, Mary stated:

> So, as far as…I mean, I don't expect them to after every session be there to be like "hey, you did a great job." But, if we meet weekly, or if we make a meeting every other week or whatever it may be, I need them to…if I'm not doing what they need me to do or what they think I should be doing, to say "you know, maybe this isn't really working" and "let's switch it" so that I can better, you know, do my job better.

The participants also discussed positive feedback versus criticism. They indicated that feedback on performance was necessary to clinical development; however, they preferred for this feedback to be constructive rather than destructive. They wanted to actively be able to incorporate the feedback into future therapy sessions to increase therapeutic effectiveness. When discussing the importance of feedback Heather stated, "I like it to be constructive criticism and not all negative "You're doing an awful job." But I think you learn a lot from people who have experience, so I know she knows more than I do, so I don't mind her sharing information or telling me to do something differently."

Participants discussed the fact that they enjoyed receiving positive feedback despite needing to learn from the constructive criticism throughout graduate training. When discussing enjoyment of positive feedback Susan stated, "and then um for them to give you positive feedback on the things

that you've planned for the objectives that you've chosen. For them to give you positive impact on that makes you feel more independent." Positive statements made by supervisors allowed students to feel a degree of success, despite level of performance, when working with clients.

Supervisor guidance. Increased guidance was needed at the beginning of graduate training as well as when working with an unfamiliar population at any point during training (3-2C, N = 8). Participants found that they required more guidance from their supervisor when beginning graduate training. As semesters progressed, they found that this clinical guidance was less necessary. For example, at the beginning of graduate training Maria stated:

> I kind of feel like the supervisor is really…we're actually doing it, but the supervisor is like, telling us what to do. And even though we might say, "I think we should do this," they could easily say, "No, not yet." Which, that's great; I don't, would never wanna, I need them to like help me. And at this point, you know, tell me like, what to do.

However, regardless of level of development, increased amounts of clinical guidance were needed in certain situations. For example, when students began clinical placements that involved providing services to unfamiliar populations, an increased amount of guidance was needed despite experience level. Susan stated:

> Entering the next semester, I'm gonna be working with adults in a nursing home setting. I'm not very experienced with adults, especially…beyond the cognitive rehab, so the swallowing, the feeding, um…I mean all of that kinda stuff is gonna be pretty new to me, so I feel like I'm gonna need a lot of guidance there with setting goals, with teaching me techniques, with…and just interacting in a different facility with different types of people.

Susan's experience is just one example of the increased level of guidance needed when working with an unfamiliar client population despite the amount of past clinical experiences.
Students began clinical training requiring frequent meetings with supervisors; however, this need continually decreased as semesters and experience progressed. Initial meetings were found to be helpful when students were first developing objectives, selecting materials, and planning their therapy methods. In agreement, Kelly stated, "Having meetings with supervisors to prepare…certainly makes me feel a little more comfortable, just walking in the first day of clinic." Some students found that even though they were expected to attend regular meetings towards the end of graduate training, they felt that these meetings were an unnecessary addition to their clinical training since they were able to more independently problem solve and think critically about their clients' goals.

Category 3: Supervisory behaviors were perceived as both helpful and unhelpful during graduate training, and these behaviors involve supervisor availability, levels of guidance provided, as well as communication (3-3). All participants (N=8) endorsed this category indicating the need for supervisor availability as well as an appropriate level of guidance during graduate training. Perceptions were similar across semesters and clinical placement sites.

Helpful supervisor behaviors. The greatest expectation of supervisors involved general availability for assistance and questions (3-3A, N = 8)*.* They wanted supervisors to be available

for general questions via email and/or in person. Graduate students also found explanations of methodology and rationale to be helpful as well as approachability. For example, when asked which supervisor traits she found to be helpful Kelly stated:

> I think just being direct and honest in their expectations, um, and being able to answer questions and being, you know, available…um… when questions and concerns… being approachable. You know, if I have, you know, a concern or a question, um, that I can get an answer and keep moving on.

Unhelpful supervisor behaviors. When Susan discussed what she found to be unhelpful, she described a situation where too little guidance may be provided to the student (3-3B, N = 8). She stated:

> Just to put me out there. And to let me go – I've heard of several um, facilities that expect you to know – or since think they since you've been in grad school for a year that you should know what you're doing, in this specific area, but, since we haven't been exposed to it that would be…horrible. Horrible would be a nice way to put it.

Other students made similar statements regarding their perceptions of unhelpful supervisor interactions. Too much guidance provided by the supervisor was also perceived as unhelpful. The participants indicated supervisors need to strike a balance between the amount of clinical guidance provided and the needs and experience of the student. A need for more guidance was indicated at the beginning of graduate training as well as when they were placed in a novel situation or with unfamiliar clinical populations. Less guidance was needed once familiarity or an amount of experience was reached.

Communication with supervisors. All participants (3-3C; N=8) endorsed this category, which resulted in two themes. These subcategories delve into both the positive and negative supervisor interactions experienced by graduate students. Negative supervisor interactions were typically influenced by the manner or lack of communication provided by the supervisor (3-3C1, $n = 5$). Lack of communication seemed to be an issue for both the student clinician and the supervisor. Several students felt like they were unable to communicate their ideas or concerns to their supervisor, which made clinical growth difficult due to the lack of feedback that could be provided regarding the students' thought processes. When discussing her supervisor difficulties, Susan stated, "I pretty much kept it to myself. I mean, I shared a few times, but it didn't do any good." Other students stated that their supervisor was not communicating effectively with them. This inefficiency was due to differing factors including: tone perceived in negative feedback and perceived punishment in supervisor statements.

However, all of the participants discussed some effectiveness and ease of communication between supervisor and supervisee throughout graduate training (3-3C2, N = 8). For example, Mary stated:

> Like, my last supervisor…I would… I could tell her exactly what I thought, and she would tell me exactly what she thought. But it's just different, like, it was just a different relationship that I had with her.

This occurred after completion of the students' sixth semester of graduate training indicating that the ability to communicate effectively with other professionals was influenced by an increase in clinical experience. This appeared to be due to the student clinicians' increased overall comfort level with the therapeutic process. Once a general comfort level was reached, students indicated greater comfort with communicating thoughts, ideas, and observations to others.

Category 4: Most graduate students did not experience a personal conflict with their clinical supervisors, and those that did were not able to resolve the conflict (3-4). All participants (N=8) endorsed this category. The majority of students did not experience personal conflicts with their supervisors. However, two participants did (*n*=2) experience conflict with their supervisors, and these two students were unable to resolve the problem. One student was not able to pinpoint where the breakdown occurred during the relationship, which resulted in increased stress when striving to gain clinical knowledge at her placement. She stated, "I spent the whole semester trying to figure out what the problem was, and I don't think she even knew." The other student found that she was unable to resolve the conflict herself and involved university faculty in the conflict-resolution process. No other conflicting situations were discussed, and other students were found to not experience similar situations.

Core Category: Undergraduate and graduate coursework prepares students to overcome clinical challenges and experience clinical growth by transcending stress to become more internally regulated and intrinsically motivated learners. This core category was derived from all five clusters and describes the overall relationship between the data provided by the students. Graduate training was affected by many interacting factors including academic experiences, clinical experiences, and the supervisory experience. These factors come together to shape a clinician's performance as well as his or her effectiveness.

Students found that academic coursework and clinical experiences acted as a preparation aid but did not fully prepare clinicians for all future clinical problems on their own. Supervisory experiences influenced clinical growth. Student expectations, supervisor expectations and the style of supervision merge together to create a learning space that is more or less likely to induce stress and promote clinical development. There was a chasm between academic coursework and clinical education. To bridge the gap, the students desire explicit and more prescriptive information that is directly applicable to what they are currently experiencing in clinic. However, with experience the students began to assimilate more experiences, become increasingly flexible, and integrate feedback which in time promoted less stress and increased accountability on the part of the student. These factors also affected what skills and actions the student perceived as necessary to produce successful therapeutic outcomes.

Discussion

The primary purpose of this paper was to use qualitative methods to explore and develop an understanding of the process of clinical development in graduate speech-language pathology students. Results illustrated the ways in which graduate students' academic and clinical experiences impacted their clinical development. It was evident from the participants' descriptions that development does not occur as a linear process, but rather, it is due to a variety of interacting academic and clinical factors that affect development as a whole.

Learning. Due to the large amounts of unfamiliar information and experiences provided to students in graduate training, application of Kolb's experiential learning model could prove useful for understanding expectations, preferences and what brings about student stress. The students preferred a combination of hands-on and visual modeling from academic and clinical faculty. This preference aligns with David Kolb's (2004) RO and AE portions of the cycle. However, CE was the students' preferred way to take in information. They preferred for information to be as prescriptive and structured as possible. They wanted information presented as if it were a linear process and that all problems have definitive solutions and answers. The students became stressed and uncomfortable when asked to engage in more abstract, theoretical or closed loop thinking. AC was not identified as a preferred way of taking in novel or new information. The participants preferred to have hands-on involvement with clinical work, while also having the opportunity to watch a supervisor conduct a therapy or diagnostic session. Students expressed interest in academic professors providing more clinically relevant and practical application opportunities within the classroom that would more closely match the kind of learning experiences they are provided in the clinic setting.

The students struggled with the disconnect between the academic and clinical learning spaces. It appears that this disconnect creates student stress because the students are unable to bridge the gap between the two spaces independently. They are experiencing different learning environments when engaged in academic and clinical learning. Academic classes are often discursive in nature whereas the clinical environment is often more recursive in nature. In class, students are introduced to material; it progresses over the course of the semester, and builds. Whereas in clinic, the students are able to practice and repeat some of the same things they have been learning over the course of the semester with their assigned clients. This gives the student the ability to feel like there is some room for learning and growth as well as the ability to develop some level of mastery. In the academic classroom, learning is often driven by lecture whereas in clinic students are asked to demonstrate, practice, and produce an outcome. Clinic is also more material-driven than typical classroom instruction. In class, there is an emphasis on theory and understanding the underlying concepts for how we make the decisions in diagnostics and therapy. However, in clinic the emphasis shifts towards relationships and understanding the client's story. That is, classroom instruction relies heavily on cognition. The students are asked to take in information, retain it, manipulate it, and think constructively. Clinic requires greater emotional intelligence. Students need to be able to adjust their behavior and adapt to the needs of other individuals. The students clearly indicated that they felt it was the faculty's job to bridge the gap between the two learning spaces, and that the clinic learning space was more comfortable and aligned more closely with their preferred learning style.

The problem-solving taxonomy developed by Shapiro and Moses (1989) includes nine stages of development that occur and can be applied to the graduate training experience as a non-linear process. Students began graduate training during the identification stage of development, and disequilibrium occurred primarily at the beginning of graduate training and transitioned to reflection as training progressed. Throughout graduate training, students experienced exploration when continually identifying the need for support, even if just a small amount, at the end of graduate training. Solidification and evaluation occurred across the span of graduate training, while construction occurred from the middle of graduate training to the end. This developmental

progression is similar to that described in Shapiro and Moses's model (1989). The overlap of this progression indicates that problem-solving development is nonlinear and that use of the model in supervision should be individualized to the student due to differences in learning styles and experience levels.

High Expectations of Supervisor and Self. When beginning graduate training, students identified that they had high expectations of themselves and their supervisors. They also perceived their supervisors' expectations as initially high when beginning graduate training. These perceptions began to level as experience progressed. The expectations of their supervisors steadily decreased as they became increasingly independent, despite not directly learning of their supervisor's expectations. This indicates an increased amount of self-efficacy. Bandura (1977) discussed the impact of an individual's beliefs about the outcomes of his or her actions. He found that once an individual realizes his or her efficacy expectations, behaviors are employed based on his or her expectations of the outcome. The participants' ability to successfully meet the supervisor's expectations, along with their increasing levels of independence, indicates that supervisors provided opportunities for self-efficacious behavior.

Providing clinical training that is scaffolded may also increase the ease with which students feel as if they have self-efficacy. Wood, Bruner, and Ross (1976) discussed the application of scaffolding in the learning environment. Scaffolded learning occurs when the supervisor meets the student at his or her performance level and allows him or her to successfully complete tasks using processes such as direction maintenance, demonstration, and frustration control; all of which can be provided in the clinical learning environment for successful self-efficacious opportunities. Supervisors can keep the student moving in a direction towards goal completion, demonstrate correct behaviors needed to complete the tasks, and manage the student's frustrations with possible failed attempts or failed clinical problem solving.

Style of Supervision. The participants discussed the overall enjoyable nature of the supervisory style employed by their supervisors. They identified that high levels of clinical growth occurred once training was complete; however, the clinical training process was experienced as stressful at times. Following is a description of the clinical growth and supervision process experienced by these students.

Guidance, independence, and meetings. Supervisors began clinical training by providing high levels of guidance and lower levels of independence to their students. This amount of guidance changed from specific to general, and decreased throughout graduate training, while the level of independence provided increased. As students' experiences increased, supervisor meetings also decreased in frequency. Meetings began at once per week, but many students identified this frequency to decrease to an "as needed" basis. Students found this appropriate as semesters and experience progressed.

Supervisor expectations. Participants stated that supervisors did not provide students with explicit knowledge of their expectations for their performance; however, students identified the ability to meet unstated expectations. McCrea and Brasseur (2003) discussed the need for supervisors to explicitly define their expectations to students; however, the results of this study indicate that not providing these explicit requests, while stressful, may play a role in transitioning student

motivation from an externally motivated learner to an internally motivated learner and also increase the self-efficacy of the graduate student throughout graduate training. This allows the chance for increased problem solving as well as an internal locus of control to develop within the students, since they are required to independently learn. When expectations were explicitly defined for the students they did experience less stress and described a more positive relationship with their supervisor.

Helpfulness & unhelpfulness. Students identified several factors as important to the supervisor-supervisee relationship. Communication, specifically the manner in which it was provided, was identified as particularly important. Students also discussed the importance of availability for assistance and questioning as an important trait in a supervisor. Availability is often construed differently when there are generation gaps between supervisor and supervisee. Today's generation student often expects immediate gratification when information is sought. As a result, if an email is not answered in short time or if a supervisor is not in his or her office when the student comes by seeking feedback, it appears that they are construed as unavailable. Supervisor availability and what that means to the student who is being supervised may be a topic that needs to be discussed openly between supervisor and supervisee. Students often do not appreciate the broader picture of a supervisor's day or time demands without explicitly being told.

The most unhelpful behavior that was identified was found to be providing too much or too little guidance. This indicates the importance of the supervisor understanding the student's current level of development. If this understanding is over or underestimated, it appears to hinder the students' graduate training experience.

Therapeutic Outcomes. Students experienced successes, as well as failures, during graduate training. They discussed the progress that was seen in their clients as beginning in the second semester of graduate training. They found that their successes in the therapy room stemmed from many sources, which were both client- and clinician-dependent. These factors were also internal as well as external. Limited research has been conducted regarding the factors that contribute to the effectiveness of a therapist within the field of speech-language pathology. As clinical growth occurred, clinicians began to realize that there was more to successful outcomes than the methodology employed. They realized that both they and the client play a role and that the therapeutic alliance was also an integral part of this process. This insight gained by the students may have promoted the flexibility that was developed and provided the students with a desire to move toward a more client-centered approach during treatment as they were considering more than just their specific therapeutic methods.

Strengths, Limitations, & Future Research Directions

The primary strength of this study includes the vast amount of information provided by the students about their training experiences. This information is foundational to understanding how to best support the supervisory experiences of students and supporting the professional development process. The qualitative research design employed is a strength of this study and includes the documented high interrater reliability as well as data saturation. All categories were found to reach saturation irrespective of difference observed in student background. The strengths discussed are noted to increase overall validity of the presented research. There are also limitations associated

with this study. The process is noted to be individualized in nature and was observed in a single graduate training program, which limits variation in student experiences. All participants were also of one cultural-linguistic background, which decreases the diversity of the provided results. The final limitation is the lack of a definition for "successful clinical development."

Future research should aim to gather further information regarding the process of clinical development with particular consideration of the supervisory process as a whole as well as factors influencing therapeutic effectiveness.

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Appendix: Interview Questions

Interview on Training and Development

In our interview, I will be asking you about your *experiences* as a student in a speech-pathology training program. I am interested in your experience and how your experiences have influenced you. I am not beginning this interview with *expectations* of what your answers will be, and am really interested in your own experience and what your training experiences have meant *in your own life.* To the extent possible I would prefer that you not mention specific client or supervisor names in our discussion. It is appropriate and I encourage you to think about the interactions you have had with specific supervisors and clients, but when you describe those experiences and interactions I would prefer that you exclude his or her name.

The overarching question of this interview is: *What is your experience of being a student in a clinical training program?*

The interview questions are as follows:

GENERAL INFORMATION

1) How would you describe your general working and learning style?
2) How would you describe your work ethic?
3) How do you measure personal success and satisfaction?

CLINICAL

1) What types of things do you do and experience as a student in the _____ semester of a clinical training program in Speech-Language Pathology?
   a) How do you currently view your role as a clinician at this point in your training and development?
      i) Probe: Feelings about the therapeutic process in terms of skills and abilities?
      ii) Probe: Accountability in terms of independence for skills at this point in training?
      iii) Probe: How they view their performance as a therapist?
      iv) Probe: What pressures, if any, are you experiencing at this point in your training and development?
         (1) How are you currently managing those pressures?
      v) Probe: Comfort level in the role as a therapist?
      vi) Probe: Broadly speaking, what factors do you feel contribute to successful therapeutic outcomes?
      vii) Probe: How do you feel about working with your clients this semester?
         (1) Do you feel you were able to connect with and identify with your clients this semester?
         (2) Were your clients able to meet your expectations in terms of their behavior and progress?
         (3) Are there some clients you feel better about than others?
   b) Describe how you feel about the process of preparing for a session.

    c) How do you feel about therapy vs. evaluations in terms of your ability and level of comfort?
    d) Have you faced any challenges this semester in your training and development as a therapist?

SUPERVISION

2) What are your current expectations and needs from your supervisors as a student in the ____ semester of a clinical training program in Speech-Language Pathology?
    a) What would be perceived as helpful from your supervisors at this point in your training?
    b) What would be perceived as unhelpful from your supervisors at this point in your training?
    c) How do you feel about getting feedback?
        i) Probe for feedback preference, timing and whether it was perceived as adequate.
    d) Did you experience any personal or clinical conflicts with your supervisors this semester?
    e) Do you feel your supervisors' expectations of you were reasonable at this point in your training?
    f) Do you feel you are receiving an appropriate amount of independence from your supervisor?
    g) Please describe any general feelings you have had regarding your supervisory experience thus far.

ACADEMIC

3) What are your current expectations and needs from the academic faculty as a student in the ____ semester of a clinical training program in Speech-Language Pathology?
    a) What role do you feel your academic courses play in your clinical training and development?
    b) Please describe any general feelings you have had regarding your academic experience thus far.