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What Do You Expect? A Comparison of Perceptions on the Roles of Clinical Educators and Graduate Clinicians

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What Do You Expect? A Comparison of Perceptions on the Roles of Clinical Educators and Graduate Clinicians

Cover Page Footnote

Thank you to Miranda Wales for her help with coding data. We would also like to express our appreciation to the many clinical educators and graduate students who took valuable time out their day to participate in this survey.

Introduction

Clinical education has been incorporated in speech-language pathology (SLP) graduate training in the United States for decades (American Speech-Language-Hearing Association [ASHA], n.d.). Comprehensive reports detailing best practices in supervision based on empirical and theoretical evidence are widely available to professionals interested in pursuing the clinical educator role (e.g., American Academy of Audiology, n.d.; ASHA, 2008; ASHA, 2013). In January 2020, ASHA instituted a two-hour continuing education requirement to further promote an understanding of the extensive skillset required for effective supervision.

Though the available education and training resources are instrumental in specifying necessary skills and competencies for clinical educators, expectation management is an important and related issue. Perceptions about clinical educator as well as graduate clinician attributes help form the basis of the supervisory relationship, which is fundamental to the graduate student's learning process as a whole (Geller & Foley, 2009; Pugh & Hatala, 2016; Rogers et al., 2010). Shared or misaligned perceptions of each stakeholder's role may either facilitate or impede the creation of a therapeutic alliance (Geller & Foley, 2009). Thus, a basic understanding of perceived expectations should be considered paramount.

There is an extensive interdisciplinary literature about role of clinical educators as perceived by student clinicians (Kilminster & Jolly, 2000; Pront et al., 2016). Studies of graduate clinicians' perspectives in allied health professions, medicine, and nursing suggest that accessibility, encouragement, and respect of their supervisor are critical for a good learning experience (Alghamdi et al., 2019; Courtney-Pratt et al., 2013; Fitzgerald, 2009; Hall et al., 2012; Taylor et al., 2012). Studies in SLP journals have noted differences in graduate students' perceptions based on level of experience: more advanced graduate clinicians expect shared responsibilities and cooperation with their supervisors, whereas novice students prefer emotional support and encouragement. These findings lend support for Anderson's model of supervision, which emphasizes a continuum of support between the supervisor and supervisee (Anderson, 1988; Fitzgerald, 2009; Mandel, 2015). A number of studies have also asked clinical educators to identify characteristics they believe necessary to foster student development. Many of these perceived characteristics from studies in medicine, physical therapy and SLP align with what findings from graduate students have suggested: effective clinical educators offer constructive feedback, provide emotional support to students, and respond openly to questions (Dijksterhuis et al., 2013; Hall et al., 2012; Mandel, 2015).

Cross-disciplinary findings to date have also suggested some subtle yet compelling discrepancies between supervisor and supervisee perceptions of the clinical educator role. For instance, a study by Jarski et al. (1990) found disagreements among physical therapy students and clinical educators on the amount of support that should be offered (i.e., "leaves students alone until asked to supervise," p.177); educators strongly agreed with the statement that they should only intervene when asked, while students disagreed. In a survey of 54 SLP students and 18 clinical educators (Mandel, 2015), graduate students felt more strongly than clinical educators that their supervisors should work cooperatively with students, while also offering direct technical support. Clinical educators, on the other hand, placed greater value than graduate students on the importance of having a sense of humor and allowing students to discuss personal feelings. Another SLP study

found that clinical educators and graduate clinicians differed in their expectations and preferences of the timing and modality of feedback (Frederickson & Moore, 2014). Cumulatively, these findings imply that clinical educators' and graduate students' perceptions of the supervisor role are not entirely aligned.

A much smaller number of inter-disciplinary studies has examined perceptions of student traits that contribute to the supervisory relationship. Clinical educators in allied health professions and medicine identified characteristics such as a willingness to take charge of learning, flexibility, attention to preparation, and professionalism as important traits for successful student clinicians, whereas undesirable student traits include arrogance, unprofessional behaviors, and an unwillingness to learn (Chipchase et al., 2012; Dijksterhuis et al., 2013; Hall et al., 2012). Insights into students' perceptions of their own role in professional training experiences are harder to find. Dijksterhuis et al. (2013) conducted content analyses from focus groups of medical students that identified the key attribute of taking ownership of one's learning. In this study, trainees' acknowledgement of their role emerged only with clinical experience. Qualitative findings from allied health students by Hall et al. (2012) are rather striking: fewer than 10% of surveyed students mentioned their own role as contributing to a positive practicum experience in contrast to a majority of clinical educators who prioritized students' active participation.

In summary, it appears that the perceptions of the roles of clinical educators and graduate students in the supervisory relationship – as viewed by the primary stakeholders – are shared, slightly mismatched, or lacking in specification. Evidence suggests that clinical educators and graduate students largely agree on the perceived role of the clinical educator with some subtle differences regarding the quantity and quality of support that is provided (Frederickson & Moore, 2014; Hall et al., 2012; Jarski et al., 1990; Mandel, 2015; Taylor et al., 2012). Perceptions about the graduate clinician's role in the relationship have been less explored, but suggest that graduate students may not fully appreciate their role in the relationship (Chipchase et al., 2012; Dijksterhuis et al., 2013; Hall et al., 2012). A mismatch or lack of understanding in perceived roles could cause unnecessary friction in the supervisory relationship resulting in negative outcomes in the learning process (Hall et al., 2013; Levett-Jones & Lathlean, 2007).

This study was designed to provide a side-by-side comparison of perceptions that could impact the supervisory relationship by addressing the following research question: do clinical educators and graduate students agree on how they perceive their own and the other's roles? Based on the literature, it was predicted that the most substantive differences would be found regarding graduate students' active role in the learning process.

Methods

Survey design. Two surveys approved by the university's Institutional Review Board (IRB) were developed to address the research question. The surveys had comparable content, but were designed to be taken by either a clinical educator or graduate student participant. The first section of the clinical education survey consisted of an IRB consent form and five demographic questions including gender, age, clinical setting(s), geographical region of the U.S., and either how many students clinical educators had supervised or how many hours graduate students had completed (according to the target participant). The surveys consisted of three types of data: 1) two open-ended prompts asking

participants to describe qualities of an ideal clinical educator and an ideal graduate clinician, 2) 24 total proposed attributes of clinical educators and graduate clinicians (12 per role) rated on a 5-point Likert scale (1 = very unimportant to 5 = very important), and 3) two comprehensive lists of the 12 clinical educator and 12 graduate clinician attributes in which participants identified and ranked the top three by importance for each role. Modeled after items in Chipchase et al. (2012), open-ended questions were constructed to elicit any length of response. Attribute items were devised based on survey questions and themes described in the inter-disciplinary literature (Chipchase et al., 2012; Courtney-Pratt et al., 2013; Fitzgerald, 2009; Hall et al., 2012; Jarski et al., 1990; Mandel, 2015; Taylor et al., 2012) as well as personal experiences. Items were independently formulated by each author (two academic faculty with supervisory experience and one second-year graduate student) and then agreed on by consensus. Attributes were written as positive descriptions with some intentional overlap in themes such as empathy, independence, and respect (e.g., ‘clinical educators understand students’ unique learning needs to appropriately guide development).

Three occupational therapy faculty with clinical experience who were blind to the research question were asked to provide an unbiased assessment of face validity and comprehensibility of attribute descriptions. Minor modifications were made according to their recommendations (e.g., word substitutions to clarify intended meaning). Surveys were entered into Typeform, the platform chosen for optimal versatility and ease of collecting data. The survey was constructed to display one question at a time with the ability to go back to any item. See Appendix for the list of open-ended questions and attribute descriptions.

Procedures. The participant pool was a convenience sample that was primarily recruited with the assistance of clinical directors of communication sciences and disorders programs from eight universities around the United States (one small private, seven large public universities) who were known to either the first or second author to include the authors’ home university. Clinic directors were sent a scripted email describing the purpose of the IRB-approved study, an estimated time to complete the survey, and the link that could be forwarded to potential participants. Approximately three weeks after the first solicitation, clinic directors were asked to resend the email, since survey studies suggest that response bias often decreases when subsequent opportunities are presented (Nulty, 2008). A second recruitment effort was initiated through a single post on ASHA’s Special Interest Group blog (SIG 2 in neurogenic communication disorders of which the first author was a member).

Data and statistical analyses. Based on similar studies across allied health fields, the recruitment goal was 150-200 total participants divided equally across groups (Hall et al., 2012; Jarski et al., 1990; Mandel, 2015). The response rate was unable to be calculated for two reasons: 1) data were not collected on the number of recipients who received the survey link from clinical directors, and 2) there was no way to track how many potential clinical educators received the SIG 2 blog post. Of those who began the survey, a significant number did not complete it, possibly due to the time commitment (average time to completion: 15 minutes; range: 4-59 minutes with outliers removed). Thirty-nine of 129 (30%) of clinical educators, and 48 of 111 (43%) of graduate students failed to complete at least 80% of survey content and were thus excluded from further analyses. Additionally, two graduate students declined to provide ratings for clinical educator attributes, although they did complete other sections, and four Likert-scale data points were missing across participants; these missing data points did not significantly affect the analysis.

Data were analyzed according to the type of information provided. The primary analysis was qualitative; open-ended questions were subjected to thematic analysis by both the first and second authors according to steps outlined in Hutchison et al. (2017; based on Braun & Clarke, 2013). Each author worked independently to group similar responses into columns (e.g., ‘open to learning new things’, ‘willing to learn’, ‘easily trainable’) resulting in approximately 7-10 candidate themes. The authors then collaborated on how responses were grouped, defined themes and subthemes, and refined categories to include identifying any outlier responses. Over a period of two months, this process was repeated four times to examine perceptions of each group for each role (i.e., clinical educator and graduate student responses for each of the two open-ended questions).

A second method of analyzing each groups’ perceptions compared their distributions of Likert-scale responses of clinical educator and graduate clinician attributes using two Mann-Whitney tests. The nonparametric test for independent samples was chosen because of several concerns regarding the nature of the data (e.g., ordinal versus continuous data, adjectival versus numerical ratings, and the use of non-standardized items; Harpe, 2015). Finally, descriptive rankings of each groups’ top three ranked attributes for each role were compared.

Results

Participants. Table 1 provides a summary of participants that completed the survey. Ninety-six percent of respondents were female, which is an accurate reflection of ASHA-certified speech-language pathologists (ASHA, 2019). The age ranges of participants corresponded with expected trends; most clinical educators were older than 30, whereas 73% of graduate students were in their early twenties. The majority of clinical educators (n = 50) had supervised over 10 graduate students.

Table 1

Participant Demographics

	Gender	Age (years)	Total no. students supervised	Hours of experience	Clinical setting	U.S. geographical region
Clinical educators n = 90	*86f / 3m	* < 30 = 4 30-40 = 33 40-50 = 29 >50 = 23	≤ 5 = 17 6-15 = 29 >15 = 44		18 = school 10 = medical 30 = various 42 = n/a	12 = northeast 49 = midwest 23 = south 6 = west
Graduate students n = 63	62f / 1m	* < 25 = 46 25-30 = 11 >30 = 6		≤ 50 = 31 > 50 = 32	21 = univ only 14 = school only 28 = various	*12 = northeast 42 = midwest 7 = south 1 = west

Note. f = female; m = male; univ = university clinic; * = one participant declined to respond

The survey did not ask graduate students to specify their year in the program, but half had completed less than 50 hours of clinical practicum ($n = 31$), whereas the other half had completed 50 or more hours ($n = 32$). Clinical placements were evenly distributed across medical, education and university settings. Geographically, the sample was over-represented by individuals from the midwestern U.S., which was likely an effect of familiarity: participants who were directly affiliated with the authors were more willing to participate in the survey.

Qualitative results for the role of clinical educator as perceived by clinical educators and graduate students. Responses to the open-ended question regarding characteristics of an ideal clinical educator were analyzed for each participant group. Themes that emerged from the data analysis were largely shared across clinical educators and graduate students, and fell under the major headings of clinician characteristics, teaching characteristics and personal characteristics. An additional theme that emerged from responses of clinical educators was identified as facilitating learning. See Table 2 for a summary of findings.

Clinician characteristics. This category included two subthemes entitled professionalism/dedication and knowledge/expertise. Participants in both groups strongly agreed that clinical educators should be organized, prompt (e.g. providing timely feedback), and reliable. Dedication was an identifiable subtheme for clinical educators, who provided descriptions such as “cares about doing a good job and is passionate about the field.” All participants felt that knowledge and expertise were key components of being an ideal clinical educator, but both groups recognized nuances in this characteristic. For instance, two graduate students wrote that the clinical educator should “be an expert in whatever setting they work in,” which was echoed by a number of clinical educators (e.g. “knowledgeable about setting in which supervision is occurring”).

Teaching characteristics. The subthemes from this category differed between groups; subthemes in common included teaching skillset and administrator of feedback. The former included communicating effectively and explicitly, “guiding,” providing resources, and being “willing to teach.” Under the category of feedback, participants across groups agreed that clinical educators need to provide timely, gentle corrections consisting of both positive and constructive feedback. One graduate student commented that clinical educators should “provide overall support that is somewhere between telling you exactly what to do and not providing any guidance at all.” There were some contradictions between graduate students on how much support was necessary as evidenced by these statements: “provide less direct supervision” versus “provide continuous feedback;” interestingly, these comments were made by students with more than 200 hours of experience.

The thematic analysis also identified several subthemes in this category that were unique to each group of respondents including an additional three subthemes for graduate students and one subtheme for clinical educators. First, graduate students acknowledged the importance of promoting independence, which included comments such as “provides space for clinician to try new methods” and “helps student to grow.” A second subtheme that emerged for graduate students was that clinical educators should act as role models. The third subtheme identified by graduate students was one of availability or approachability (e.g., “not too overbearing, but not absent,” “good listener,” and “easy to communicate with and meet with”). These themes were echoed by clinical educators, but were identified as subthemes under the category of facilitating learning, which will

Table 2

Perceptions of the ideal clinical educator by theme and subtheme for clinical educators and graduate students as well as examples

CE theme	CE subtheme	Sample comments	GS subtheme	GS theme
Clinician characteristics	Professionalism/ Dedication	<i>punctual; good work ethic; ethical; passionate about the profession</i>	Professionalism/ Dedication	Clinician characteristics
Clinician characteristics	Knowledge/ Expertise	<i>stays current with research and literature; knowledgeable about whatever setting</i>	Knowledge/ Expertise	Clinician characteristics
Teaching characteristics	Teaching skillset/ Communicator	<i>trains students in all aspects; able to explain clearly; guidance</i>	Teaching skillset	Teaching characteristics
Teaching characteristics	Administrator of feedback	<i>timely; positive and constructive; tactful</i>	Administrator of feedback	Teaching characteristics
Teaching characteristics	Expectations	<i>clear plan of action; high and appropriate expectations</i>		
Facilitating Learning	Availability/ Approachability	<i>easy to meet with; good listener; open and willing to answer questions; present</i>	Availability	Teaching characteristics
Facilitating Learning	Setting the example	<i>a model clinician; practice what they preach; charismatic</i>	Role model	Teaching characteristics
		<i>accepting of student's ideas; aware of needs</i>	Promoter of independence	Teaching characteristics
Facilitating learning	Adaptability	<i>flexible; tolerant; open-minded</i>		
Facilitating learning	Openness	<i>allows students' mistakes; open to new ideas; gives student room to grow</i>		
Facilitating learning	Supportiveness	<i>kind, empathetic; respectful of students</i>	Supportiveness/ Empathetic	Personal characteristics
Personal characteristic	Sociability	<i>patient, calm, friendly; easy-going, personable</i>	Sociability	Personal characteristics
Personal characteristic	Humility	<i>willing to learn from the student; not afraid to mistakes in front of the student</i>		

Note. CE = clinical educator; GS = graduate student

be discussed below. For clinical educators, the concept of expectations emerged as a third subtheme. Comments ranged from having “appropriate expectations with the level of the student” to “high expectations for performance.” Two graduate students mentioned that clinical educators should provide “clear expectations,” but these comments were not prevalent and were thus classified under the skillset of teaching.

Facilitating learning. The thematic analysis indicated that clinical educators drew a distinction between the usual components involved in teaching (teaching and communication skills, effective delivery of feedback, and expectations/goals set for student clinicians) and behaviors that especially facilitated the learning process by “creating an environment conducive to learning.” The identifiable subthemes in this category included availability/approachability, adaptability, openness, setting the example, and support. Notably, all of these subthemes were recognizable in graduate students’ comments, but they either fell under a different theme or were less represented than in the clinical educators’ comments as will be discussed below.

First, clinical educators agreed with graduate students about the necessity of being “approachable so that the student feels comfortable asking questions,” which included being “willing to take time with a student.” Next, although similar, two distinct categories emerged with regard to being adaptable (e.g., “can shift supervisory style based on what each individual student needs,” and “how to balance stepping in when needed with allowing and fostering independence”) versus being open (e.g., “gives student opportunities to take risks and ‘stretch,’” “able to let the student learn through experience and mistakes,” and “allows student clinician to learn but not expect a clone of themselves”). Graduate students made some similar comments that fell under the theme of promoting independence as a teaching characteristic, but their comments did not strongly draw a distinction. Fourth, clinical educators also agreed with graduate students that their role is to model behavior for students. And finally, comments of clinical educators included providing support to graduate students that facilitated the learning process as reflected by clinical educators’ descriptions such as nurturing, respect, patience, listening, and the “ability to remember what it was like in the field.” This last subtheme also appeared in graduate students’ comments, but under the dominant theme of personal characteristics.

Personal characteristics. There were small differences in identifiable subthemes between the two groups, but all participants recognized the importance of the clinical educator being sociable. Descriptions for this subtheme that were common to both groups included positive, easy-going yet goal-oriented, and friendly. As discussed above, graduate students also attributed supportiveness or empathy as an important subtheme of personality characteristics. In addition to the many descriptions in this category concerning understanding, patience, and kindness, one graduate student poignantly summarized this quality in terms of “building the clinician up rather than tearing her down.” Finally, clinical educators’ comments included an additional subtheme that only two graduate students mentioned: humility. Examples included “willing to learn from a student,” to “try new things suggested by the student,” and “not constantly trying to prove themselves.”

Qualitative results for the role of graduate clinician as perceived by clinical educators and graduate students. Themes were identified for each group regarding descriptions of the ideal graduate clinician. Although most subthemes overlapped, the analysis showed differences in the

specificity of primary themes. Graduate students' responses were grouped into the three main themes of personal, professional and learning characteristics. Clinical educators' responses fell under the primary themes of personal characteristics, professional characteristics, and characteristics that promote student success. See Table 3 for a summary of findings.

Table 3

Perceptions of the ideal graduate clinician by theme and subtheme for clinical educators and graduate students as well as examples

CE theme	CE subtheme	Sample comments	GS subtheme	GS theme
Personal characteristics	Positive qualities	<i>creative; patient; grounded polite; enthusiastic</i>	Positive qualities	Personal characteristics
Personal characteristics	Compassion	<i>empathy; caring; kind</i>	Compassion	Personal characteristics
Personal characteristics	Dedication	<i>dedicated; invested; motivated; determined</i>	Dedication	Personal characteristics
Personal characteristics	Communication	<i>good interaction; appropriate body language; rapport building; warm</i>	Communication	Personal characteristics
Professional characteristics	Collaboration	<i>cooperative; works well with others</i>	Collaboration	Professional characteristics
Professional characteristics	Workplace expectations	<i>professional; organized; hard-working; prepared; reliable; clinical writing skills</i>	Workplace expectations	Professional characteristics
Characteristics that promote student success	Foundational knowledge	<i>strong content knowledge; knowledge of EBP; able to apply knowledge to practice</i>	Foundational knowledge	Professional characteristics
Characteristics that promote student success	Problem-solver	<i>reflective; resourceful; analyze errors and make online adjustments</i>		
Characteristics that promote student success	Adaptability	<i>flexible; open-minded; willing to adjust based on input</i>		
Characteristics that promote student success	Willingness to learn	<i>receptive; ready to learn; asks questions freely; eager</i>	Openness	Learner characteristics
Characteristics that promote student success	Initiator	<i>kind, empathetic; respectful of students</i>	Independent-minded	Learner characteristics
		<i>able to take criticism; able to process feedback</i>	Accepting of feedback	Learner characteristics

Note. CE = clinical educator; GS = graduate student

Personal characteristics. The groups agreed on four subthemes in this category: positive qualities, compassion, dedication, and communication. Positive qualities shared by both groups included attributes such as friendly, energetic, and creative. The subtheme of compassion (e.g., empathetic, thoughtful, kind) was also similar across groups. All participants agreed that graduate clinicians should be dedicated, motivated, and driven. Finally, participants provided similar responses about the importance of communication style for graduate clinicians; individuals from both groups mentioned the ability to establish rapport with clients, use people skills, and to present themselves as engaging and “endearing.”

Professional characteristics. Another category where there was large consensus across groups was the theme of professionalism, specifically the subthemes of workplace expectations and collaboration. Graduate students and clinical educators identified similar characteristics of professionalism such as being organized, punctual, prepared, and hard-working. Clinical educators added some lengthier comments beyond descriptors such as “willingness to leave personal issues outside of the therapy environment,” “understanding that 8-4 is not the only time commitment involved,” and “able to understand that stress is part of the job and not to complain about it.” Another somewhat shorter subtheme that emerged from both groups’ responses regarded the ability to collaborate. A final subtheme which was identifiable in both groups’ comments was foundational knowledge; in the analysis, this subtheme was included under characteristics that promote graduate student success for clinical educators rather than professionalism for graduate students. Regardless of primary theme classification, many participants commented about the importance of graduate students having foundational knowledge of relevant content, assessment practices, and evidence-based interventions (including one clinical educator who appreciated “suggestions about things she knows that the supervisor may not know”).

Characteristics that promote student success. This primary theme emerged from clinical educators’ responses, and not cohesively in graduate students’ responses. The category included foundational knowledge (as described above under professional characteristics), problem-solving, adaptability, willingness to learn, and initiating. Graduate students described the last two subthemes somewhat differently and were thus better categorized under the theme of learning characteristics.

First, problem-solving was an identifiable indicator of graduate student success for clinical educators partially due to the quantity of comments in this category. Many clinical educators commented about a graduate clinician’s ability to use reflection, critical thinking, and synthesis skills. Only two graduate students identified such skills as being important, which is why they were embedded under the independent-minded learner subtheme discussed in the next section. Second, the subtheme of adaptability was recognizable in a large number of clinical educators’ comments (e.g., “easily adaptable to the ever changing therapy world” and “willing to adjust based on input”), and was distinguishable from the subtheme of willingness to learn (e.g., being okay with asking ‘What do I do next?’, “a good listener open to the mentoring process,” and “characteristics of a life-long learner who is eager to learn”). The latter subtheme included the largest number of clinical educators’ comments. The final subtheme under the heading of characteristics that promote graduate student success was initiating (e.g., “not afraid to take risks,” “goes the ‘extra mile’ to research appropriate strategies and approaches to implement,” and “very

few go beyond what is asked of them and those are the ones who stand out”). This subtheme was also remarkable for its large number of clinical educators’ responses.

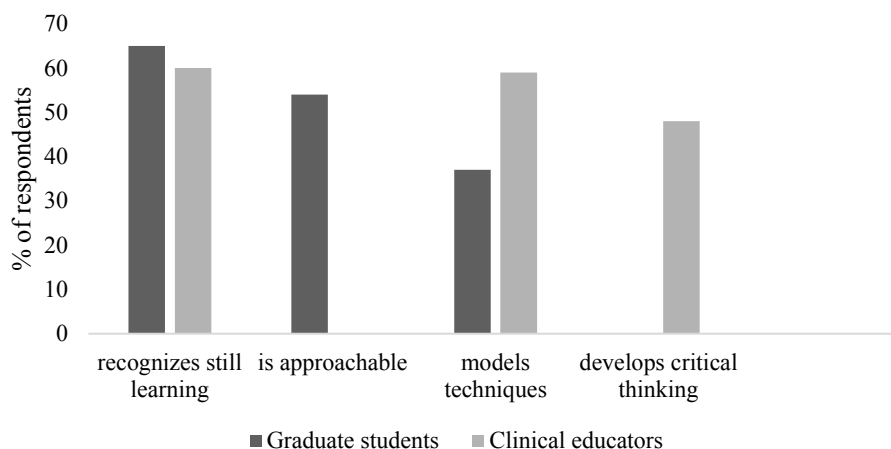
Learner characteristics. This dominant theme for graduate students consisted of three subthemes: openness, independent-minded, and accepting of feedback. Graduate students’ responses for openness included “takes advantage of teachable moments,” “ready to learn,” and “asks questions.” The descriptor “flexible” was frequently used in both groups and was included under the openness subtheme, whereas it fell under adaptability for clinical educators. For the second subtheme of independent-minded, graduate students provided descriptions such as “accesses research literature or resources beyond what the supervisor gives,” “pro-active,” and “innovative,” which were qualitatively similar to clinical educators’ subtheme of initiative; however, there was a striking quantitative difference between groups in these types of responses. The final identifiable subtheme for graduate students was specific to accepting feedback (e.g., “open to feedback,” and “willing to take constructive criticism to help them better their education as well as their clinical abilities”). These comments for clinical educators fell under the subtheme of willing to learn.

Quantitative results of the perceptions of clinical educators versus graduate students. The next analysis compared mean Likert ratings for each of the 12 attribute statements per role across groups. The distributions of responses were relatively similar across participant groups for both roles. For clinical educator attributes there were no between-group differences for nine of 12 items including: recognizing students are still learning, modeling treatment and assessment techniques, treating students like colleagues, providing students with positive feedback, taking student learning needs into account, allowing students to be independent, being approachable, allowing students to share caseloads, and developing critical thinking skills. Distributions differed for three clinical educator attributes: clinical educators should be empathetic and provide emotional support to students (mean rank: 90; clinical educators = 84.37, 60 graduate student = 65.08; $U = 3498.00$, $p = 0.04$), should be subject-matter experts (mean rank: 90; clinical educators = 71.20, 63 graduate student = 85.29; $U = 2313.00$, $p = 0.03$), and should have high expectations (mean rank: 90; clinical educators = 86.24, 63 graduate student = 63.79; $U = 3667.0$, $p < 0.001$). For graduate clinician attributes, there were no statistically significant differences between distributions across groups.

Descriptive results of attribute rankings for each role. Finally, we compared results derived from the two survey questions in which participants were asked to rank the top three attributes that were most important for each role. Figure 1 is a visual summary of what graduate students and clinical educators perceived to be the most important attributes of clinical educators. Sixty percent of educators and 65% of graduate students agreed that the most important characteristic of clinical educators was to recognize that graduate clinicians are still learning. Results diverged for the second most important quality: 54% of graduate students felt that clinical educators should be approachable, whereas 59% of educators prioritized modeling assessment and treatment techniques. Thirty-seven percent of graduate students ranked modeling as the third most important attribute, while 42% of educators felt that encouraging development of critical thinking skills was important.

Figure 1

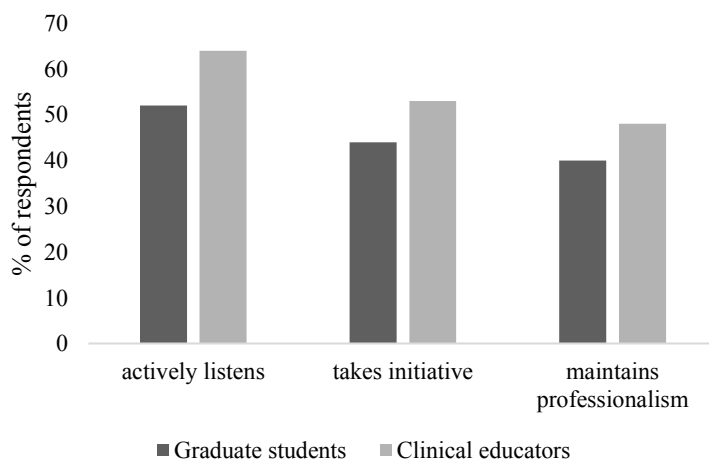
Top three attributes of clinical educators according to graduate students and clinical educators



Descriptive results for prioritizing graduate student attributes showed subtle differences between groups (see Figure 2). Many participants prioritized the importance of listening to clinical educators' feedback (52% of graduate students and 53% of educators). There was a substantial difference between groups regarding the second most important attribute: 64% of clinical educators felt that graduate clinicians should take initiative in the clinical environment as compared to 44% of graduate students. Groups largely agreed that maintaining professionalism should rank in the top three of attributes as demonstrated by 40% of graduate student and 48% of educator responses.

Figure 2

Top three attributes of graduate clinicians according to graduate students and clinical educators



Discussion

This study aimed to concurrently compare how graduate students and clinical educators perceive their own and each others' roles with the purpose of using these findings to strengthen the supervisory relationship. Previous inter-disciplinary findings have suggested potential differences in how primary stakeholders view the graduate clinician's role in particular. Qualitative responses to open-ended questions yielded the most substantive data, which were further supported through comparing Likert-scale ratings and descriptive rankings. Perceptions of clinical educators and graduate students were largely in agreement, but as predicted, there were a few observable differences specific to the role of graduate clinician that could negatively impact the supervisor-supervisee relationship. The following discussion will highlight between-group similarities and differences in perceptions for each role as well as some implications for various stakeholders based on these findings.

Perceptions of the role of clinical educators and implications. Findings from this study indicated that clinical educators and graduate students largely agreed on the role of the clinical educator, which corresponds with inter-disciplinary results (Courtney-Pratt et al., 2013; Fitzgerald, 2009; Hall et al., 2012; Mandel, 2015; Taylor et al., 2012). Open-ended descriptions of clinical educators were easily categorized into dominant themes of professional, personal, and teaching characteristics. Quantitative data further confirmed common perceptions of the educator's role such as modeling professional and clinical behaviors, treating students as future colleagues, and providing positive in addition to constructive feedback.

Unlike graduate students, however, clinical educators drew an additional distinction between teaching behaviors – communicating well, administering feedback tactfully, and setting expectations for students – and characteristics that particularly facilitated learning. Although graduate students provided some similar comments, clinical educators' responses conveyed a responsibility to promote student learning through being adaptable to students' needs, open to their ideas (and mistakes), and readily available and supportive. Similar to findings by Mandel (2015), clinical educators also had significantly higher Likert-ratings than graduate students on the attribute of being empathetic and providing emotional support to students. This sensitivity to specific components that contribute to the student's learning process, of which the student may not even be fully aware, is supported by the literature (Kleinhans et al., 2020; Pront et al., 2016; Pugh & Hatala, 2016).

One compelling between-group difference that has not been observed in previous studies was the converging evidence that clinical educators should have high expectations of their students. As noted in the qualitative analysis, a number of clinical educators felt that clearly communicated, appropriate yet high expectations for students should be instituted, whereas few graduate students mentioned this aspect. Notably, this priority for clinical educators was strongly echoed in Likert-rating scale data. These findings support the recommendation that clinical faculty, clinical educators, and clinic directors should more explicitly define their expectations for graduate clinicians through pedagogical methods such as tying learning objectives to specific clinical behaviors (Ehret et al., 2018; Ferguson, 2010; Kleinhans et al., 2020). In doing so, graduate students will be cognizant of goals they should be working toward.

Some interesting discrepancies were observed between graduate students and clinical educators according to the type of data that were analyzed. For instance, qualitative data showed large-scale enthusiasm across participants regarding approachability, yet this attribute only made the graduate students' list of top three most important characteristics, not clinical educators'. Qualitative data also yielded consensus that clinical educators should possess knowledge and expertise specific to the population they work with; however, graduate students gave stronger Likert-scale ratings than clinical educators to the attribute of being a subject-matter expert. Upon closer examination, the between-group differences in quantitative measures were relatively minor (e.g., approachability ranked fourth for clinical educators; the mean Likert-scale rating for subject-matter expertise was 4.38 for graduate students versus 4.15 for clinical educators), and therefore are unlikely to represent meaningful differences in perception that would affect the supervisor-supervisee relationship.

One final observation in the qualitative data that deserves mention is the theme of humility. Although graduate students did not discuss this characteristic, a large number of clinical educators' comments indicated a recognition of the benefit of learning from graduate students as long as the clinical educator was open to that benefit. Humility was not included as an attribute in this study because it has only begun to be recognized in the literature for its important role in the supervisory relationship (Watkins, 2020). This theme would be interesting to explore in future SLP studies in scholarship of teaching and learning.

Mismatched perceptions of the role of graduate clinicians and implications. In this study, perceptions of graduate clinicians were largely in agreement as evidenced by groups' similar Likert-ratings and parallel rankings. The more illuminating findings, however, were found in the qualitative data. There was a between-group difference in identifiable themes that was reminiscent of what was found for the role of clinical educator. Specifically, themes from both groups included professional and personal characteristics, but the third category differed: graduate students' comments were identified as learning characteristics whereas clinical educators' comments were better classified as characteristics that promote student success. Although this distinction might appear trivial, the content in each theme suggested a substantial difference.

As suggested in previous literature, graduate students are not necessarily aware of the degree to which their attitudes can influence their learning outcomes (Dijksterhuis et al., 2013; Hall et al., 2012). Although graduate students are generally familiar with the concept of "active learning," clinical educators' responses defined several core components: (a) foundational knowledge including the ability to apply that knowledge to a clinical setting, (b) problem-solving abilities, (c) adaptability, (d) willingness to learn, and (e) taking initiative. The last two subthemes, in fact, drew the most comments; clinical supervisors look for graduate students who eagerly accept the apprenticeship process by being receptive to what the educator has to offer and being unafraid of trying. Though taking the initiative was ranked by both groups as an essential attribute, there was a large difference in enthusiasm as reflected by percentages. The implication of these results is that graduate students either are unaware of these desirable characteristics, or simply do not recognize the importance of their own actions and attitudes. In either case, it is highly recommended that clinical faculty, clinical educators, and clinic directors define and provide examples of these characteristics for graduate students so they may fully benefit from each clinical experience.

Several studies suggest that active learning in the form of self-reflective journaling can and likely should be taught to graduate clinicians (Hill et al., 2012; Kleinhans et al., 2020).

Study limitations. There are several identifiable limitations of this study. The first limitation was that the response rate was unable to be determined. Without this information, it was difficult to identify or make predictions about potential selection bias. The length of the survey likely affected both response and completion rates, especially for graduate students. Related to these limitations was the convenience sampling that was conducted for this study; ASHA's Special Interest Group 11, Administration and Supervision, would have been a more appropriate channel for distributing the survey link since members of this group likely have a more vested interest in issues related to supervision. Finally, it is possible that the rating scale for survey questions was construed differently across participants; for instance, participants could have interpreted the rating scale for attributes as important either in principle or on a more personal level. Revised wording, clearly defined anchor points, and/or more extensive piloting of survey questions could have addressed these concerns (Harpe, 2015). On the other hand, the fact that the quantitative data largely echoed qualitative findings suggests that this concern may not have significantly impacted results.

Summary recommendations. Even though the clinical educator is responsible for creating a work environment where graduate clinicians feel safe to take on new challenges, graduate students need to fully understand their role in the learning process. One of the primary findings of this study is that expectations are not necessarily shared by both parties, and would likely benefit from being discussed from the outset. Educators, including supervisors and clinic directors, might consider providing examples for graduate students on what it means to be open and adaptable in the learning process and to take initiative in a particular clinical setting. Though clinical educators value having high expectations for their graduate clinicians, it is best not to assume that graduate students know what these expectations entail.

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Appendix

Survey Questions

- 1) Please provide some characteristics or qualities of what you would consider to be an “ideal” graduate clinician.
- 2) Please provide some characteristics or qualities of what you would consider to be an “ideal” clinical educator.
- 3) Please complete the following section based on your perspectives of your clinical supervisory/graduate experience. Mark the appropriate response for each statement based on how important each of the following factors is to you. (Likert-scale: 1 = very unimportant, 2 = unimportant, 3 = neutral, 4 = important, 5 = very important).

Graduate clinicians:

1. independently devise assessment and treatment plans.
 2. maintain professionalism at all times.
 3. actively listen to clinical educators’ feedback and apply without prompting.
 4. bring an adequate base of knowledge to the clinical population at that setting.
 5. take initiative in the clinical environment.
 6. contribute to successful learning outcomes of the placement.
 7. follow the clinical educator’s lead.
 8. maintain a positive attitude despite obstacles or negative feedback.
 9. treat clinical educators as superiors as opposed to colleagues.
 10. seek out opportunities for additional knowledge areas.
 11. demonstrate flexibility in assessment and treatment methods.
 12. solicit technical assistance and feedback from clinical educators.
- 4) Next, rank order the top 3 statements (listed above) from 1-3 in order of importance with #1 as the most important factor to you.
 - 5) Again, complete the following section based on your perspectives of your clinical supervisory/graduate experience. Mark the appropriate response for each statement based on how important each of the following factors is to you. (Likert-scale: 1 = very unimportant, 2 = unimportant, 3 = neutral, 4 = important, 5 = very important).

Clinical supervisors:

1. recognize that their students are still learning and may have limited independence.
 2. are empathetic and provide emotional support to their students.
 3. model assessment or treatment techniques for their students.
 4. treat their students like colleagues.
 5. provide students with positive feedback.
 6. allow their students to independently devise their own assessment and treatment plans.
 7. are subject-matter experts in their field.
 8. allow their students to share the caseload.
 9. understanding students’ unique learning needs to appropriately guide development.
 10. are approachable.
 11. encourage development of critical thinking skills such as differential diagnosis and application of evidence-based practice.
 12. have high expectations for their students.
- 6) Finally, rank order the top 3 statements (listed above) from 1-3 in order of importance with #1 as the most important factor to you.