"Shouldn't You Be Collaborative By Now?": Supervisory Needs, Expectations, And Satisfaction Across The Educational Trajectory In Speech-Language Pathology

By: **George W. Wolford**, Laura L. Wolford, Schea Fissel Brannick, Megan Scott, and Rebekah Smith

Abstract

In speech-language pathology, models of supervision suggest supervisors should both adjust their supervisory technique to match learners' needs and provide less-directive support with more experienced learners. This cross-sectional survey design sampled supervisee (N = 61) needs, expectations, reported supervisor behavior, and satisfaction at different points in their career. Results indicated less of a change in needs and expectations over time than was anticipated. In addition, supervisees reported that supervisors used similar supervisory behaviors regardless of learner experience level. We discuss the implications of these results for supervision methodologies.

George W. Wolford, Laura L. Wolford, Schea Fissel Brannick, Megan Scott & Rebekah Smith (2021). "Shouldn't you be collaborative by now?": Supervisory needs, expectations, and satisfaction across the educational trajectory in speech-language pathology, The Clinical Supervisor, 40:2, 241-262, DOI: 10.1080/07325223.2020.1833268. Publisher version of record available at: https://www.tandfonline.com/doi/full/10.1080/07325223.2020.1833268

"Shouldn't you be collaborative by now?": Supervisory needs, expectations, and satisfaction across the educational trajectory in speech-language pathology

George W. Wolford, Laura L. Wolford, Schea Fissel Brannick, Megan Scott, and Rebekah Smith

Department of Speech-Language Pathology, Midwestern University

ABSTRACT

In speech-language pathology, models of supervision suggest supervisors should both adjust their supervisory technique to match learners' needs and provide less-directive support with more experienced learners. This cross-sectional survey design sampled supervisee (N = 61) needs, expectations, reported supervisor behavior, and satisfaction at different points in their career. Results indicated less of a change in needs and expectations over time than was anticipated. In addition, supervisees reported that supervisors used similar supervisory behaviors regardless of learner experience level. We discuss the implications of these results for supervision methodologies.

KEYWORDS

Anderson's continuum model; cognitive apprenticeship; speech-language pathology; clinical education; supervision

Introduction

Training a novice student learner into a competent professional is a critical task of clinical education across multiple fields (Kennedy et al., 2005; Mazerolle & Bowman, 2017; Westerman et al., 2010). Supervisors[1] are tasked with moving supervisees from solely didactic knowledge toward independent clinical practice. In many health-care fields, this trajectory of clinical education spans graduate education as well as a post-graduation residency or fellowship. Throughout, the supervisee gradually assumes more responsibilities and the supervisor fades direct oversight over time. Kennedy et al. (2005) described this transition as "progressive independence," which they indicated lacks empirical support but is a "time-honored and well-entrenched tradition" (p. S109).

The field of speech-language pathology (SLP) in the United States follows a progressive independence model of clinical teaching. SLP students attend didactic coursework and often simultaneously begin closely supervised clinical practicum experiences early in their master's programs. The American Speech-Language-Hearing Association (ASHA) requires students to complete at least 400 hours of supervised clinical practice during their graduate education (ASHA, 2020a, January 1). This supervision must be conducted live and

CONTACT George W. Wolford gwolfo@midwestern.edu Midwestern University Therapy Institute, 5815 West Utopia, Glendale, AZ 85308.

extend over at least 25% of the student's clinical hours. Following the completion of their graduate program, new clinicians must complete at least 1,260 hours of supervised practice as a Clinical Fellow (CF) to be granted their certificate of clinical competence ([CCC] ASHA, 2020a, January 1). However, the supervision requirements are much reduced, with only 18 hours of on-site observation and 18 hours of "other monitoring activities" (e.g., supervisory conferences or looking over written reports) required periodically throughout the process. Therefore, direct supervision is only required approximately 1.5% of the total time.

Supervision in speech-language pathology

Throughout clinical graduate training and fellowship experiences, clinical supervisors provide mentorship and guidance to help hone the supervisee's clinical skills and scaffold them toward independence. Supervisors may include clinical faculty members, internship supervisors, and coworkers who serve as clinical fellowship mentors (McCrea & Brasseur, 2020). Regardless of where they meet the supervisee in their educational trajectory, all supervisors have a hand in shaping the supervisee's skills as a clinician. Therefore, the supervisory methods they use can have a significant impact on supervisees' future clinical practice.

Researchers in the field and professional organizations have long called for increased supervisor training (ASHA, 2013; Procaccini et al., 2017). Beginning in 2020, ASHA required all SLPs who supervise students to complete at least 2 hours of professional development in clinical supervision (ASHA, 2020a, January 1). However, there is limited evidence on best practices in supervision available for supervisors to access (Dudding et al., 2017). Therefore, there is a critical need for research that informs supervision models and best practices in supervision.

The continuum model

The most influential and well-recognized model of clinical education in speech-language pathology in the United States is the continuum model proposed by Jean Anderson in 1988 (ASHA, n.d.; Dudding et al., 2017). In her book on clinical supervision in speech-language pathology and audiology, Anderson (1988) outlined a continuum of clinical independence across which supervisees become increasingly responsible for their own supervision and seeking guidance. The continuum model conceptualizes supervisees as progressing sequentially across three stages: evaluation and feedback, transitional, and self-supervision. In the evaluation and feedback stage, the supervisor uses a direct-active style, taking control of most, if not all, therapy decisions, using directive behaviors such as coaching and telling the supervisee specifically what to do. In the transitional stage,

the supervisee gradually assumes increasing amounts of the responsibility for planning and decision-making in therapy, and the supervisor uses more of a collaborative style. This stage is marked by a gradual decrease in directive behaviors used by the supervisor and a gradual increase in collaborative, or supportive, decision-making. In the self-supervision stage, the supervisor is available for consultation and support as needed. Supervisee independence is achieved progressively as the supervisor continues to reduce directive behaviors while increasing collaborative behaviors. The goal of this stage is for supervisees to increasingly take on greater responsibility for their own clinical learning.

Although the model is stage-based, Anderson (1988) indicated that progression along the continuum is not always consistent for all supervisee skills or linked directly to the supervisee's level of experience. Indeed, the ASHA (2008) technical report on supervision in the field noted that Anderson's (1988) stages "should not be viewed as time-bound, as any individual supervisee may be found at any point on the continuum depending on situational variables as well as the supervisee's knowledge and skill" (paragraph seven). However, in attempting to apply the continuum model to a training context, supervision literature published since the introduction of the continuum model reflects an implicit assumption that the amount of clinical experience or time from the start of a supervisee's graduate program should be predictive of independence. For instance, some have asserted that CFs should be expected to be at the consultative or self-supervision stage (McCrea & Brasseur, 2003; Ostergen, 2011). Others have directly tied a tabulation of previous academic and clinical experiences to expectations of independence that calculates into a grade (Mawdsley & Scudder, 1989; Shriberg et al., 1975), demonstrating how this assumption is ingrained into clinical training within the field.

The cognitive apprenticeship model

Although the continuum model (Anderson, 1988) is specific to the fields of speech-language pathology and audiology, the cognitive apprenticeship model (Collins et al., 1987) is commonly applied across health-care fields (Lyons et al., 2017). However, it is not as often referenced in speech-language pathology. The cognitive apprenticeship model is focused on making the supervisor's cognitive processes explicit as well as responding to environmental and cultural variables of the learning task (Lyons et al., 2017). The focus is on the supervisee's skill in reasoning through a clinical task, rather than the overall independence level of the supervisee. Collins et al. (1987) described six teaching methods, grouped into three categories, which are designed to convey the way an expert would approach a task. The core group (modeling, coaching, and scaffolding) is a set of more directive behaviors. In modeling, the supervisor demonstrates the desired clinical skill. In coaching, the supervisee completes the clinical skill, and the supervisor provides direct feedback. Scaffolding

describes the sorts of supports the supervisor provides so the supervisee can demonstrate the skill successfully. The second group has two methods, articulation and reflection, that are more indirect. These methods are used to encourage introspection and problem-solving strategies. In articulation, supervisors ask supervisees to put their knowledge into words and, in reflection, supervisors provide further insight by comparing supervisees' thought process to their own. The final method exploration is its own group, which focuses on teaching supervisees autonomy by setting open-ended goals and allowing supervisees to devise solutions and objectives on their own.

Broadly, several of the techniques within the cognitive apprenticeship model are similar to Anderson's description of directive and collaborative supervisory behaviors. The descriptions of modeling and coaching are similar to the directive behaviors prescribed for supervisors implementing a direct-active framework. The descriptions of methods that enhance problem-solving and autonomy (i.e., articulation, reflection, and exploration) align best with Anderson's description of collaborative or indirect behaviors. However, although the continuum model asserts a progression of less-directive teaching methods from one stage to the next, a supervisor using the cognitive apprenticeship model may continue to use all methods at all levels of experience. The continuum model is a trajectory along which the supervisor and supervisee progress, but the cognitive apprenticeship model does not imply such a trajectory. Instead, it provides the supervisor an array of teaching methods to use based on critical factors, including differences in the content of tasks, the sequencing of learning activities, and the context of the clinical task.

Supervisory needs over time

In each model, it is incumbent upon the supervisor to meet supervisees at their skill level for optimal learning. Both models stress the importance of supervisors adjusting their supervisory technique as the supervisee progresses toward expertise. However, it is not yet known how much speech-language pathology supervisees' needs change throughout the clinical education process.

One way to study changes in independence is to examine supervisees' self-reported supervisory needs and expectations of the supervisory process. Some researchers have found that, as students progress through their clinical education, their needs and expectations decrease, indicating increased independence. Brasseur and McCrea (2020) stated that the literature shows strong examples of supervisees' gradual decrease in supervisory needs and a preference for an indirect, more collaborative style as their careers progress. To study this, Larson (1981) developed two scales, Larson's Supervisory Needs Rating Scale (LSNRS) and the Supervisory Expectations Scales Rating Scale (LSERS). Using these scales, students self-report their supervisory needs (behaviors students felt they required in order to learn) and expectations (behaviors the student

anticipated would occur as part of a quality supervisory process). Larson found that pre-practicum students had higher expectations and stronger needs than experienced students with over 150 clock hours. Plexico et al. (2017) used the same scales to assess change in supervisory needs and expectations longitudinally for seven graduate students. They found that, over the course of graduate training, the students' supervisory needs and expectations generally decreased, though this change was not necessarily observed from term to term. Plexico et al. (2017) noted that both needs and expectations were higher than in Larson's original study, which they partially attributed to generational differences.

Conversely, others have suggested that a supervisee's reported needs do not always neatly correspond to the level of experience. Means (2005) described substantial differences between students with similar levels of experience who were at the same time point in the same program. Hart et al. (2008) found no correlation between the amount of clinical experience and supervisory needs. Yet, often study designs and results are more nuanced and do not strike directly at the heart of this question. For example, Mandel (2015) compared the differences between supervisor and supervisee expectations and compared the discrepancies at different points in a graduate program. Though they found no differences between first and second-semester students' expectations for supervisory directive behavior, they did not compare expectations directly. Instead, they assessed the discrepancies between students' and supervisors' expectations and compared the discrepancies between groups.

Based on mixed research findings, it is unclear if a supervisor should anticipate different supervisory expectations and needs from supervisees at different points in their educational career. Without that knowledge, supervisors cannot know what to expect of their role, which has critical implications for supervisory training. Supervisors may have preconceived notions of how confident or adept supervisees should be based on how far they have progressed in their clinical education (McCrea & Brasseur, 2020; Mandel, 2015; Ostergren, 2011). The assumption that supervisees with more clinical experience will need less direction may have practical implications for supervisory style. For example, a supervisor might expect and welcome a deluge of questions or requests for demonstration from supervisees in their first clinical rotation but expect a higher level of initial independence from a CF.

Supervision after graduate school

There has been limited research on the first year of supervised professional practice within speech-language pathology (Ostergren, 2011), though supervisory methods used with supervisees early in their professional practice have been studied in other fields. In a study of medical education, based on the cognitive apprenticeship model, Olmos-Vega et al. (2015) used the Maastricht Clinical Teaching

Questionnaire ([MCTQ]; Stalmeijer et al., 2010) to sample medical residents' preferences of the cognitive apprenticeship teaching methods. They found that residents across all levels of training valued each of the teaching methods to an extent. However, residents with less experience preferred the core methods while those with more experience preferred problem-solving techniques. Specifically, junior medical residents (1st year) had the highest preference toward modeling of any method, intermediate residents (2nd year) had the highest preference toward coaching, and senior residents (3rd–5th years) preferred articulation. These trends suggest that supervisees prefer changing supervisory behaviors over time toward less directive methods. These data are interesting when compared to the models proposed within speech-language pathology because the medical residents' preferences transitioned over the span of two or more years of professional practice following graduation. However, in the field of speech-language pathology, the length of professional training after graduation, the clinical fellowship (CF), is much shorter. Speech-language pathology graduates complete their clinical fellowship in under a year, typically within nine months (ASHA, 2020a, January 1). In the Olmos-Vega et al. (2015) study, residents who were nine months into their training reported a preference for directive methods. Yet, research stemming from the continuum model (Anderson, 1988) would dictate that supervisors should not be using such directive methods, nor would these methods be preferred.

In addition, the research on the real-world behavior of supervisors in the field does not suggest that supervisory behaviors change based on the supervisee's presentation. There is some historical evidence that supervisors in the field use a more directive approach regardless of the supervisee's presentation (Brasseur, 1989). McCrea and Brasseur (2020) implied that this consistent directive style is used inappropriately, stating, "very little systematic training of supervisors has occurred until very recently and so it is more likely than not the supervisors do misperceive themselves and do demonstrate a predominate single supervisory style over time and across supervisees" (p. 26). However, Ostergren (2011) found that supervisees in their first year of professional practice reported that most of their supervisors were using a consultative or collaborative style. In that study, supervisees' self-reported skills and different supervisory styles were not correlated, suggesting that perhaps supervisors were not appropriately matching their teaching techniques to supervisees' needs.

Overall, research findings on the impact of experience on the supervisory process are mixed. There are conflicting reports of how supervisory behaviors or supervisee expectations change in relation to how far the supervisee has progressed in their clinical education (McCrea & Brasseur, 2020; Ostergren, 2011; Plexico et al., 2017).

Accordingly, in this study, we sought to explore how SLP supervisees' expectations and needs change across their clinical education and how

supervisory behaviors interact with supervisee variables across the clinical education trajectory. Three research questions guided this study:

(1) To what degree do supervisees' needs and expectations change over time?
(2) To what degree do supervisees report a progression of clinical teaching methods as they gain experience, and how satisfied are they with that clinical teaching?
(3) What is the nature of relationship between supervisees' needs, expectations, and the clinical teaching they receive?

Though the evidence is mixed, based on the literature supporting progressive independence and the prevalence of Anderson's (1988) model within the field, we hypothesized both supervisee needs and expectations would decrease over time. We also hypothesized that supervisory teaching behaviors reported by supervisees would change over time based on supervisees' evolving needs.

Methods

Study design

We used a cross-sectional survey design to sample supervisees' needs, expectations, and reports of supervisory methods at four different points in time, each one year apart. Surveys were distributed during the start of the fall term via e-mail and Facebook groups. This timing allowed for the researchers to sample from students who were a) not yet in clinic (pre-practicum), b) finishing up their final in-house clinical practicum assignment (final practicum), c) starting their CF year (CF Start), and d) either finishing their CF year or had already completed their CF experience (CF End). This design mirrored the time frame used in Olmos-Vega et al. (2015).

Participants

Participants included four cohorts from the same university. We recruited participants from the same university to control for differences in instructional methodology and timing of clinical experiences. All groups except the pre-practicum group had completed didactic coursework that included education on the CF process and a review of professional resources, including the ASHA clinical fellowship experience video (ASHA, 2016a, August 2). We gathered demographic data about participant age, work experience before graduate school, and time of entry into graduate school as part of survey procedures to describe the sample. Gender, race, and ethnicity data were not collected since cohort demographics were similar to ASHA membership demographics – over

95% female membership and only approximately 8% racial minorities (ASHA, 2020b) – and certain responses would have led to identifiable data.

Procedures

Surveys were distributed electronically using the RedCap survey software via e-mail and cohort Facebook groups and were not identifiable. All participants provided informed consent to participate in survey procedures according to the approved research protocol (AZ IRB #1266). The survey was sent to 200 potential participants, with a response rate of 30.5%. Of the 61 participants who responded, 10 submitted incomplete surveys. Participants were removed from the survey if they provided an incomplete summed scale or if they did not complete an entire subsection. Participants were not removed for providing no answer to the qualitative questions, yielding a final sample size of 51 completed surveys. These respondents were grouped by graduate school entry time: 17 (33%) were in the Pre-Practicum group, 15 (29%) were in the Last Practicum, 4 (8%) were in the CF Start group, and 15 (29%) were in the CF End group. In the CF End group, all participants reported to be in the 18–37 age bracket and 5 were former speech-language pathology assistants (SLPAs). In the CF Start group, all but one participant (age 38–58) reported their age in the 18–37 bracket and 3 were former SLPAs. In the Last Practicum group, all but one participant (age 38–58) reported their age to be in the 18–37 bracket and 6 were former SLPAs. In the Pre-Practicum group, all participants reported their age to be in the 18–37 bracket and 6 were former SLPAs.

Survey

In addition to demographic questions, the following rating scales were also distributed: the Maastricht Clinical Teaching Questionnaire ([MCTQ]; Stalmeijer et al., 2009), Larson's Supervisory Needs Rating Scales ([LSNRS]; Larson, 1981), and Larson's Supervisory Expectations Rating Scales ([LSERS]; Larson, 1981).

The Maastricht Clinical Teaching Questionnaire (MCTQ)

The Maastricht Clinical Teaching Questionnaire (MCTQ) is used to evaluate clinical teaching skills based on the cognitive apprenticeship model (Stalmeijer et al., 2010, 2009). It is 15 questions long and has been shown to be a valid and reliable measure of clinical teaching (Boerboom et al., 2012; Stalmeijer et al., 2010, 2009). The first 14 questions ask supervisees to rate their agreement with statements about their most recent supervisor on a 1–5 Likert-type scale across five domains. The "Safe Learning Environment" (SLE) domain assesses the extent to which supervisees felt safe and respected in the supervisory relationship and the learning environment. The other four domains directly map to the teaching

methods of the cognitive apprenticeship model (Collins et al., 1987). The "modeling" subscale describes the extent to which the supervisor used demonstration to teach skills. The "coaching" subscale describes how the supervisor encouraged the supervisee to complete a task and provided helpful feedback thereafter. The "articulation" subscale describes how well the supervisor encouraged supervisees to verbalize their reasoning and provided helpful insight. The "exploration" subscale describes how well the supervisor provided opportunities for the supervisee to create learning goals for themselves and evaluate themselves with more independence. In the final question, supervisees are asked to provide an overall 1–10 rating for their supervisor.

The MCTQ was printed as specified in Stalmeijer et al. (2010), except the word "doctor" was replaced with the word "clinician" to fit the target population. In addition, due to an error in survey creation, the CFstart and CFend groups received a survey in which the final rating scale for their supervisor spanned from 1 to 5 instead of 1 to 10. In order to account for this difference, the scores from this item were halved for the final practicum group, which put all numbers on a 5-point scale. The Pre-Practicum group was excluded because they did not have a current supervisor to rate.

Larson's Supervisory Needs Rating Scale (LSNRS) and Supervisory Expectations Rating Scale (LSERS)

The Larson's Supervisory Needs (LSNRS) and Expectations (LSERS) scales (Larson, 1981) are used to evaluate supervisees' perceptions of their own supervisory needs and expectations. Needs describe the supports and actions that they require of their supervisor to allow them to grow and learn as a clinician, such as suggestions on therapy techniques. Expectations are the supports and actions that they anticipate the supervisor is likely to provide, such as expectations for setting goals for the client. The 23 Likert-type scale items from each scale were included as well as the open-ended questions at the end of the measures. Each item was rated on a 5-point scale, with higher numbers equating to more supervisory needs or higher expectations and lower numbers corresponding to the anticipation of less support and more independence. The Last Practicum group was asked to rate their current supervisor, and the CF Start and CF End groups rated their clinical fellowship supervisor.

Analytic strategy

We employed descriptive techniques and tests of assumptions followed by statistical tests of research question hypotheses. Descriptive techniques involved summarizing data using descriptive statistics and visual graphical analyses. We tested for normality and independence in the dataset by survey, survey subscales, and participant group. Results are organized by research question, then by descriptive results, followed by results of hypothesis testing.

To test research question 1, we conducted two analysis of variance (ANOVA) tests to determine if supervisee needs and expectations differed significantly between participant groups and used a Holm method corrected alpha for multiple simultaneous comparisons to follow-up *t*-tests. To test research question 2, we conducted a Kruskal–Wallis rank sum test to evaluate for changes between participant groups in their perception of supervisor teaching techniques. This technique was selected due to the non-normal distribution that is typical of survey data. To test research question 3, we conducted Spearman rank correlations to determine the nature of relationships between supervisees' needs and expectations and their report of clinical teaching methods used.

Results

Research question 1: needs and expectations over time

In the convention of prior works in the field (Means, 2005; Plexico et al., 2017), scores from the LSNRS and LSERS were each summed to form overall needs and expectations scores for comparison. Higher scores indicate higher degrees of desired and expected supervisory support. Means and standard deviations for each group's supervisory expectations and needs scores are reported in Table 1 and can be viewed in Figure 1. The averages are similar to the numbers found in Plexico et al.'s (2017) recent study of supervisory needs and expectations, but higher than those found in Larson (1981)'s original study.

Following examination of the descriptive results, we conducted two ANOVAs for needs and expectations. Though supervisory expectations were not significantly different between groups, $F(1, 49) = 1.91$, $p = .17$, the groups had significantly different needs, $F(1, 49) = 9.13$, $p < .01$. Pairwise testing between groups using the Holm method revealed statistically significant differences only between pre-practicum students and the two alumni groups (Pre-Practicum – CFstart, $t = -2.67$, $p < .05$; Pre-Practicum – CFend, $t = -2.85$, $p < .05$). Using simple linear regression for needs as a function of time, every year increase within the program decreased needs on average by 3.68. However, the model yielded an adjusted R-squared of .14, indicating that the time explained only 14% of the variability in supervisory needs.

Regarding practical significance, a decrease of 3.7 would mean the change in needs for about 4 questions out of 23 by one tier (e.g., from *a very great extent*

Table 1. Needs and expectations by group.

Time	*N*	Expectations Mean	Expectations *SD*	Needs Mean	Needs *SD*
Pre-Practicum	17	92.88	10.90	85.65	11.83
Last Practicum	15	90.47	10.55	79.67	11.32
CF Start	4	86.50	21.81	69.00	7.12
CF End	15	87.47	11.30	75.00	8.82

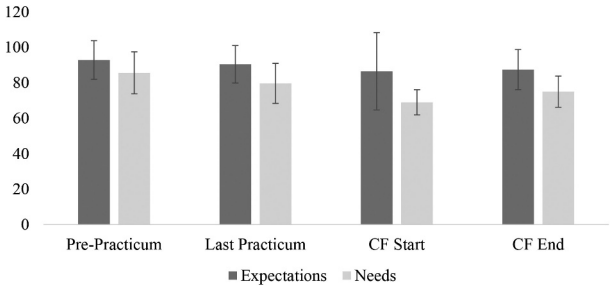

Figure 1. Needs and expectations over time.

to *a great extent* or *a great extent* to *some extent*) within one year time. From pre-practicum to the conclusion of supervisees' clinical fellowship, the model would predict a one-tier reduction in needs and expectations for a total of approximately 14 questions. The low R^2 and little change in practical significance suggested this finding is not indicative of a strong shift in self-perceived supervisee needs as a function of time.

Qualitative needs and expectations responses

Both LSNRS and LSERS contained a qualitative response section at the end of the survey. Only five participants responded to the open-ended questions, which limited our ability to draw meaningful conclusions from the qualitative sections. Though three participants responded from the Final Practicum group, only one participant responded from each of the other groups. Of note, the responses from the CF Start and CF End groups described workplace constraints, such as insufficient time for supervision, needing more support with specific populations, and wanting help navigating workplace policies.

Research question 2: supervisor teaching methods and overall satisfaction

To analyze supervisees' perceptions of their supervisors' performance, scores on the five subtests of the MCTQ (modeling, coaching, articulation, exploration, SLE) were each averaged. Since the Pre-Practicum group did not have a supervisor to rate, they were excluded from this analysis, bringing the total number of participants to 34 for the subsequent analyses. Results showing averages by time are graphed in Figure 2.

Figure 2 indicates a general reduction in clinical teaching strategies and a decline in overall satisfaction in all clinical teaching over time. Visual graphic analysis of MCTQ subtests suggests that both more directive strategies (modeling and coaching) as well as indirect collaborative strategies (articulation and exploration) decreased over time. However, variability also increased substantially during the later practicum experiences.

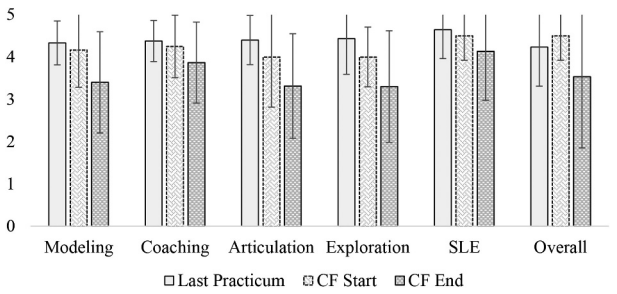

Figure 2. MCTQ subtests by Cohort.

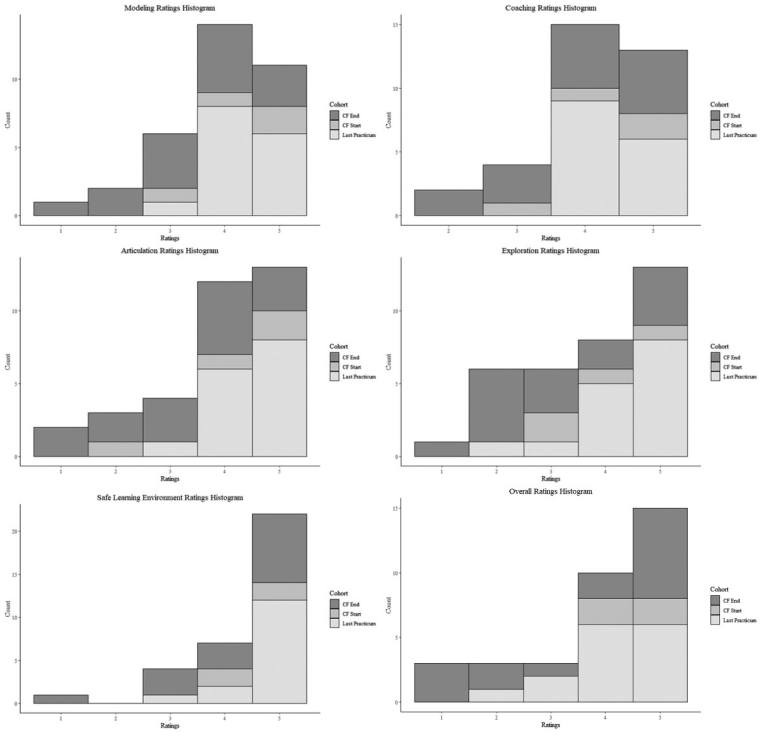

Figure 3. Histograms of teaching preferences.

The data were further mapped with stacked histograms of the constructs over time to analyze the distribution of scores by cohort (see Figure 3). In all categories, the presence of low scores (1s and 2s) increased for the CF End group relative to the scores of other supervisors. This was true of all clinical teaching techniques, not only directive ones.

The apparent differences in the distributions indicated a need to further investigate the data statistically. None of the results were normally distributed, confirmed by a Shapiro–Wilks test (overall $W(34) = .77$, $p < .001$, modeling $W(34) = .88$, $p < .01$, coaching $W(34) = .89$, $p < .01$, articulation $W(34) = .88$, $p < .01$,

exploration $W(34) = .85$, $p < .001$, SLE $W(34) = .88$, $p < .001$). Therefore, a Kruskal–Wallis rank sum analysis was used to investigate differences across cohorts. None were found to be significant with error correction ($p > .05$).

Research question 3: relationship between needs, expectations, and teaching methods

The correlations between all subscales of the MCTQ, LSERS, and LSNRS were investigated further to determine the nature of the relationship between supervisee needs, expectations, and perception of clinical teaching methods. Given that data from the MCTQ were non-normally distributed, rank-based Spearman correlations were conducted. The results are shown in Table 2.

Supervisory needs were moderately positively correlated with expectations. However, we found no significant relationship between supervisees' self-reported needs and their overall satisfaction with their supervisor or the other subsections of the MCTQ. In contrast, supervisory expectations were not correlated with the overall satisfaction rating, but were correlated with reports of modeling, articulation, and safe learning environment. Therefore, supervisees' satisfaction with their supervisors did not appear to be related to their self-reported expectations or needs.

In addition, the overall satisfaction rating was significantly positively correlated with all MCTQ subscales. There was a moderate correlation between overall satisfaction and modeling, coaching, articulation, and exploration. There was a strong correlation between safe learning environment and overall satisfaction.

Discussion

Research question 1: needs and expectations over time

Although both needs and expectations trended downwards over time, the difference in needs was not significant. Regardless of supervisees' level of experience, they reported similar needs from their supervisors. The only statistically significant difference in supervisees' expectations of their

Table 2. Correlations between supervisory needs, expectations, and perceived supervisor performance.

	1	2	3	4	5	6	7
1. Overall Satisfaction	–						
2. Expectations	.45+	–					
3. Needs	.28	.54*	–				
4. Modeling	.68**	.64**	0.26	–			
5. Coaching	.64**	.47+	−0.02	0.61**	–		
6. Articulation	.52**	.52*	0.19	0.76**	0.70**	–	
7. Exploration	.41*	.47+	0.23	0.67**	0.66**	.80**	–
8. SLE	.78**	.55*	0.28	0.69**	0.71**	.60**	.62**

+ $p < .1$, * $p < .05$, ** $p < .01$. p-values were adjusted to account for multiple tests.

supervisors was found between the Pre-Practicum group and the two CF groups. Supervisees' expectations did not substantially change in terms of practical significance between groups, nor did experience explain much of the variance. This result appears to indicate that supervisees have similar expectations of how much direction they will be provided regardless of how far they have progressed in their clinical education trajectory. In addition, supervisees do not perceive their needs to change substantially throughout their educational career. These findings run counter to models of supervision that would indicate supervisees should become more independent and expect less-directive involvement from their supervisors over the course of their development as clinicians.

Inherent qualities of the supervisee or the specific, and often increasingly complex, task demands may play a much larger role in determining supervisees' needs and expectations than their overall experience in the field. If this is true, it challenges the assumption that supervisors should be able to predict supervisees' independence based on experience. This finding is important for those in supervisory roles in all levels because a mismatch in expectations can damage the supervisory relationship, which is of critical importance to the learning process (Watkins, 2014). Current literature suggests that supervisors estimate higher levels of student independence than the students do of themselves (Mandel, 2015), and expectations in the field are that a CF should be at or nearing the self-supervision stage of Anderson's (1988) model when they begin the CF process (McCrea & Brasseur, 2020; Ostergren, 2011). An open and honest discussion about supervisory expectations and needs may be important for a supervisee-supervisor dyad.

Rather than making assumptions about progression through supervisory stages, such as those set forth by Anderson (1988), it may be worthwhile considering the stages of supervision to be a trajectory for each supervisory relationship or each new skill. Anderson (1988) noted that novel experiences may need a more directive style at first, even for more advanced supervisees. These results are consistent with findings in psychology; Tracey et al. (1989) also observed that more advanced students preferred less direction with simple clinical skills but wanted more direction when grappling with unfamiliar or high-stakes clinical scenarios. In the current study, supervisees indicated a preference for a mixed style, regardless of their level of experience. This result may relate to students' experience of changing clinical environments and expectations increasing from graduate experiences to internships through the CF. They may constantly have a mixture of more familiar and unfamiliar clinical expectations.

As the field of speech-language pathology continues to expand in scope (ASHA, 2016b), current supervisees are confronted with ever-increasing clinical expectations and possible novel experiences (Harn et al., 1999; Langmore, 2017; Vallino-Napoli & Reilly, 2004; Ward, 2019). However, the length of the

training program in the United States remains approximately 2 years and is focused on a generalist training regimen (Donaldson, 2015). This evolving scope may also help to explain the generally higher needs and expectations found in this study and Plexico et al. (2017), relative to earlier data (Larson, 1981). Supervisees noted that they expected additional support when working with clients for whom they had little experience and with new tasks specific to a particular workplace. Given the wide breadth of educational requirements and potential variability of their clinical experiences, supervisees may be more prepared for some tasks than others. Additionally, CF supervisors have limited time (Ostergren, 2011) and an expectation to be as collaborative as possible if their supervisees are at a consultative or later transitional stage (McCrea & Brasseur, 2020). Although some posit that being directive later in career hurts supervisees' independence regardless of supervisee opinions (McCrea & Brasseur, 2020), these data would suggest that directive behaviors may still be desired, especially for new skills or novel client populations.

Research question 2: supervisor teaching methods and overall satisfaction

Results of this study are not entirely consistent with the idea that supervisors continue to be overly directive and not change their styles based on supervisee presentation. Though there was no significant difference in teaching methods between groups, the use of both collaborative and directive strategies by all supervisors was an unexpected finding. Adherence to a strict stage-based continuum model approach would predict a gradual decline in directive behaviors, which was not reported. The mix of directive and collaborative behaviors is more in alignment with the cognitive apprenticeship model. Supervisors drawing from that framework would be more likely to use all techniques and fade the more directive ones over time.

However, the teaching methods used by the CF supervisors were highly variable, which was unexpected. Although many supervisees reported high overall satisfaction and reported their supervisors using a variety of behaviors, several supervisees did not. Ostergren (2011) also found that a subset of supervisees had very negative experiences during their first year of professional practice. Though training in supervision and prior experience may partially explain the difference in supervisory behaviors between the final practicum participants' on-campus supervisors and the CF supervisors, there are likely other factors at play. The work environment during the first year of professional practice is a substantially different learning environment than a university clinic. The CF supervisor is also a working professional who has many other responsibilities and a minimal requirement for supervisory time, which may be all the time a workplace allots for their duties. Supervisees' qualitative comments spoke to some of the difficulties this can cause. They commented that CFs find themselves navigating the workplace as an independent professional for the first time and needing help to learn this new role.

They may also find a new skill is needed, such as the ability to work with a new population, and therefore require more support. These new responsibilities may partially explain the continued high expectations for support from their supervisor. At the same time, there is a dramatic decrease in the set standard of supervision. This situation could lead to less contact time and meaningful interactions than the supervisee would prefer. Thus, the supervisee reports minimal supervision, low ratings on supervisory behaviors, and satisfaction.

Research question 3: relationship between needs, expectations, and teaching methods

Supervisory needs and expectations were not correlated with overall satisfaction. Supervisory needs were not correlated to any of the MCTQ subscales of clinical teaching methods, though supervisory expectations were moderately correlated to modeling and articulation. All subscales of the MCTQ were positively correlated with the overall satisfaction rating, which is consistent with findings from Stalmeijer et al. (2010). The more a supervisee felt that the supervisor engaged in any of these clinical teaching domains, the higher their overall rating of their supervisor. However, the amount of clinical teaching that the supervisee believed they needed was not correlated with any of these outcomes. Supervisees' perceptions of their own educational needs or independence were not linked to the methods of teaching they felt their supervisor provided or how satisfied they were with that teaching.

From these results, it is unclear if supervisors did not appropriately match their style with students' reported needs. One would not necessarily expect a correlation between needs and overall rating if supervisors matched their style appropriately. For instance, providing more support for high needs would lead to satisfaction. However, one would have expected a positive correlation between needs and directive methods (coaching and modeling) and a negative correlation with more indirect methods (articulation and exploration). Given that this did not occur, it is possible supervisors did not match their style to supervisees' needs, or there may be a disconnect between students' professed needs and what actually leads them to rate an educator highly.

What the students claimed to need for learning did not match with the teaching methods that led them to rate their supervisor well. This supports other research into learning outcomes and student ratings. Other researchers have found that the teaching methods that students profess work best for their learning often do not align with those that improve educational outcomes (Deslauriers et al., 2019; Henderson et al., 2012; Marsh & Roche, 1997; McKeachie, 1997). Teaching ratings are influenced by external factors such as gender, race, and attractiveness (Ambady & Rosenthal, 1993; Peterson et al., 2019; Storage et al., 2016) and are not related to how much the student learns (Uttl et al., 2017). Despite this, institutions of higher education turn to student ratings as a primary assessment tool for evaluating

educators and determining eligibility for advancements like tenure and promotion. It is therefore important for clinical educators to be aware that the clinical education techniques that supervisees state they need may not match those that lead them to score their educators highly.

Additionally, it appears that supervisee expectations are positively correlated with modeling and articulation. With high expectations may come higher level of engagement in the supervisory process, leading those supervisees to seek out more guidance. Supervisors may respond to this by increasing their levels of modeling or articulation. For instance, a supervisees who expect a supervisor to model therapy behaviors may request the supervisor to do so. Supervisees with higher expectations may also be more aware when a supervisor meets those expectations. For instance, supervisee who expect to be asked for a rationale for decisions may notice how a supervisor works in those questions; that supervisee would be more likely to later respond positively that the supervisor used articulation strategies.

In relation to Anderson's (1988) supervisory stages, some supervisees may not reach self-supervision by the end of the clinical fellowship process. This possibility is explicitly acknowledged in the proponents of Anderson's model (McCrea & Brasseur, 2020). However, the degree to which that occurs is unclear. Results of this study are in alignment with Olmos-Vega et al. (2015), who found that residents continued to want more directive teaching multiple years following graduation. Perhaps the trajectory toward self-supervision extends far past the clinical fellowship process more frequently than assumed. If that is true, though, then it is incumbent upon the new clinician to find appropriate mentorship after the CF is over and to continue to seek out educational opportunities throughout their professional career.

Limitations to this study

This study was limited by a small sample size, which stemmed from sampling one university population and a modest response rate. In addition, the methodology was cross-sectional rather than longitudinal. Although our results characterize cohorts, there may be individual changes in needs or expectations over time. Ideally, larger groups of supervisees would respond longitudinally to provide a complete picture of their changing perceptions.

In addition, this study was conducted before ASHA increased the continuing education requirements for supervision (ASHA, 2020a, January 1). Future researchers should assess how these continuing education requirements may change the supervisory landscape, as well as how well supervisor behaviors and supervisee outcomes map on to the supervisee perceptions as evaluated in this study.

Supervision take-aways

These results have implications for supervisory practice in speech-language pathology. A supervisor may need to use variety of teaching methods at all levels of training. The correlation between overall clinical teaching ratings and all subscales also suggests that the use of any supervisory teaching methodology is viewed positively by supervisees.

Supervisors should also expect high needs and expectations from supervisees, regardless of the experience of the supervisee. A direct, open-minded conversation about supervisees' strengths, needs, and expectations may be warranted regardless of the level of experience, given that desired independence may vary substantially. The supervisor may wish to mitigate expectations for supervision during the clinical fellowship process. Both members of the supervisor-supervisee dyad may need to realize that a need for clinical mentorship does not stop at the end of the clinical fellowship process. Especially given the expanding expectations of SLPs, the new clinician may expect a longer trajectory for learning until self-supervision and true independence.

Note

1. This paper discusses the trajectory from a novice entering graduate school to a working professional. Throughout this trajectory, the terms "supervisor" and "supervisee" are used in at least some cases at all stages. Other terms might be preferred or used at specific stages for highly specific responsibilities or roles, such as "clinical educator" (McAllister, 2005) to describe working with students or "mentor" for working with professionals (ASHA, 2013). For the purposes of this paper, "supervisor" and "supervisee" will be used as generic terms for clarity.

Disclosure statement

No potential conflict of interest was reported by the authors.

Notes on contributors

George W. Wolford, PhD, MS CCC-SLP is a clinical assistant professor and certified, licensed speech-language pathologist with Midwestern University. At the university, he is currently serving as a clinical educator with a continuous caseload as well as teaching Professional Issues and Ethics in Speech-Language Pathology, mentoring the student capstone experiences, and mentoring student theses. His research focuses on clinical education and interventions for pediatric populations, especially those with autism spectrum disorder (ASD).

Laura L. Wolford, PhD CCC-SLP is passionate about improving the way we communicate about voice and swallowing. Her research focuses on finding best practices for teaching complex physiological and clinical concepts by integrating evidence-based education practices with evidence-based voice and swallowing evaluation and treatment methodologies. As a practicing speech-language pathologist, she has worked in Trauma I hospitals, long-term

acute care, and acute rehabilitation facilities. Dr. Laura Wolford serves as an appointed member of the Scientific and Professional Education Board of the American Speech-Language-Hearing Association, as a Student-to-Empowered Professional (STEP) program mentor, and as a copy editor for the journal Teaching and Learning in Communication Sciences and Disorders (TLCSD). In addition, she has been a conference planner for multiple Pan American Vocology Association symposia.

Schea Fissel Brannick, PhD, CCC-SLP is an assistant professor and certified, licensed SLP with Midwestern University where she teaches courses on language, literacy, learning and autism spectrum disorder (ASD) and developed a transactional adapted group intervention for children with ASD. Her dual program of research uses eye tracking to explore cognitive responses to visual literacy stimuli in children with ASD, and explores visually adapted group intervention materials and methods to improve literacy outcomes in children with ASD and children with language disorder at risk for reading impairment.

Megan Scott earned her undergraduate degree at California State University, Fullerton and M. S. at Midwestern University in Speech Language Pathology. She is currently completing her Clinical Fellowship at Charter Oak Unified School District in Covina, CA.

Rebekah Smith earned her undergraduate degree at the University of Iowa and M.S. at Midwestern University in Speech Language Pathology. She is currently completing her Clinical Fellowship.

ORCID

George W. Wolford http://orcid.org/0000-0001-9318-5814
Laura L. Wolford http://orcid.org/0000-0002-2823-0989
Schea Fissel Brannick http://orcid.org/0000-0003-1220-4193

References

Ambady, N., & Rosenthal, R. (1993). Half a minute: Predicting teacher evaluations from thin slices of nonverbal behavior and physical attractiveness. *Journal of Personality and Social Psychology*, *64*(3), 431–441. https://doi.org/10.1037/0022-3514.64.3.431

Anderson, J. L. (1988). *The supervisory process in speech language pathology and audiology*. Pro-Ed.

ASHA. (2008). *Clinical supervision in speech-language pathology* (Technical Report). www.asha.org/policy

ASHA. (2013). *Knowledge, skills and training consideration for individuals serving as supervisors* (Final report of ASHA Ad Hoc Committee on Supervision). http://www.asha.org/uploadedFiles/Supervisors-Knowledge-Skills-Report.pdf [PDF]

ASHA. (2016a, August 2). *ASHA's clinical fellowship experience for speech-language pathology*. YouTube. https://www.youtube.com/watch?v=gGB-GZUUXNQ

ASHA. (2016b). *Scope of practice in speech-language pathology*. https://www.asha.org/policy/sp2016-00343/

ASHA. (2020a, January 1). *2020 standards and implementation procedures for the certificate of clinical competence in speech-language pathology*. https://www.asha.org/Certification/2020-SLP-Certification-Standards/

ASHA. (2020b). *Profile of ASHA members and affiliates, year-end 2019*. www.asha.org

ASHA. (n.d.). *Clinical education and supervision*. https://www.asha.org/Practice-Portal/Professional-Issues/Clinical-Education-and-Supervision/

Boerboom, T. B., Mainhard, T., Dolmans, D. H., Scherpbier, A. J., Van Beukelen, P., & Jaarsma, A. D. (2012). Evaluating clinical teachers with the Maastricht clinical teaching questionnaire: How much 'teacher' is in student ratings? *Medical Teacher*, *34*(4), 320–326. https://doi.org/10.3109/0142159X.2012.660220

Brasseur, J. (1989). The supervisory process: A continuum perspective. *Language, Speech, and Hearing Services in the Schools*, *20*(3), 274–295. https://doi.org/10.1044/0161-1461.2003.274

Brasseur, J. A., & McCrea, E. S. (2020). Understanding the supervisory process. In E. S. McCrea & J. A. Brasseur (Eds.), *The clinical education and supervisory process in speech-language pathology and audiology* (pp. 45–106). SLACK Incorporated.

Collins, A., Brown, J. S., & Newman, S. E. (1987, January). *Cognitive apprenticeship: Teaching the craft of reading, writing and mathematics* (Technical Report No. 403). Centre for the Study of Reading, University of Illinois.

Deslauriers, L., McCarty, L. S., Miller, K., Callaghan, K., & Kestin, G. (2019). Measuring actual learning versus feeling of learning in response to being actively engaged in the classroom. *Proceedings of the National Academy of Sciences of the United States of America*, *116*(39), 19251–19257. https://doi.org/10.1073/pnas.1821936116

Donaldson, A. L. (2015). Pre-professional training for serving children with ASD: An apprenticeship model of supervision. *Teacher Education and Special Education*, *38*(1), 58–70. https://doi.org/10.1177/0888406414566995

Dudding, C. C., McCready, V., Nunez, L. M., & Procaccini, S. J. (2017). Clinical supervision in speech-language pathology and audiology in the United States: Development of a professional specialty. *The Clinical Supervisor*, *36*(2), 161–181. https://doi.org/10.1080/07325223.2017.1377663

Harn, W. E., Bradshaw, M. L., & Ogletree, B. T. (1999). The speech-language pathologist in the schools: Changing roles. *Intervention in School and Clinic*, *34*(3), 163–169. https://doi.org/10.1177/105345129903400308

Hart, P., Turner, G., Duesing, B., Galley, D., Harlan, C., Turner, J., Wilson, J., Zimmer, B. J., & Jonge, R. D. (2008). Relationships between students self-perceived supervisory needs and end of semester outcomes. *Perspectives on Administration and Supervision*, *18*(2), 50. https://doi.org/10.1044/aas18.2.50

Henderson, C., Dancy, M., & Niewiadomska-Bugaj, M. (2012). Use of research-based instructional strategies in introductory physics: Where do faculty leave the innovation-decision process? *Physical Review Special Topics- Physics Education Research*, *8*(2). https://doi:https://doi.org/10.1103/PhysRevSTPER.8.020104

Kennedy, T. J., Regehr, G., Baker, G. R., & Lingard, L. A. (2005). Progressive independence in clinical training: A tradition worth defending. *Academic Medicine*, *80*(10), S106–S111. https://doi.org/10.1097/00001888-200510001-00028

Langmore, S. E. (2017). History of fiberoptic endoscopic evaluation of swallowing for evaluation and management of pharyngeal dysphagia: Changes over the years. *Dysphagia*, *32*(1), 27–38. https://doi.org/10.1007/s00455-016-9775-x

Larson, L. C. (1981). *Perceived supervisory needs and expectations of experienced vs. inexperienced student clinicians*. [Unpublished doctoral dissertation]. Indiana University.

Lyons, K., McLaughlin, J. E., Khanova, J., & Roth, M. T. (2017). Cognitive apprenticeship in health sciences education: A qualitative review. *Advances in Health Sciences Education: Theory and Practice*, *22*(3), 723–739. https://doi.org/10.1007/s10459-016-9707-4

Mandel, S. (2015). Exploring the differences in expectations between supervisors and supervisees during the initial clinical experience. *Perspectives on Administration and Supervision*, *25*(1), 4–30. https://doi.org/10.1044/aas25.1.4

Marsh, H. W., & Roche, L. A. (1997). Making students' evaluations of teaching effectiveness effective: The critical issues of validity, bias, and utility. *American Psychologist*, *52*(11), 1187–1197. https://doi.org/10.1037/0003-066X.52.11.1187

Mawdsley, B. L., & Scudder, R. R. (1989). The integrative task-maturity model of supervision. *Language, Speech, and Hearing Services in Schools*, *20*(3), 305–319. https://doi.org/10.1044/0161-1461.2003.305

Mazerolle, S. M., & Bowman, T. G. (2017). A time for reflection: Should we reconsider the direct supervision standard in clinical education? *Athletic Training Education Journal*, *12*(2), 106–112. https://doi.org/10.4085/1202106

McAllister, L. (2005). Issues and innovations in clinical education. *Advances in Speech-Language Pathology*, *7*(3), 138–148. https://doi.org/10.1080/14417040500181239

McCrea, E. S., & Brasseur, J. A. (2003). *The supervisory process in speech-language pathology and audiology*. Pearson.

McCrea, E. S., & Brasseur, J. A. (2020). *The clinical education and supervisory process in speech-language pathology and audiology*. SLACK Incorporated.

McKeachie, W. J. (1997). Student ratings: The validity of use. *American Psychologist*, *52*(11), 1218–1225. https://doi.org/10.1037/0003-066X.52.11.1218

Means, J. (2005). A case study of the supervisory process: Are we meeting the needs of the marginal and superior student? *Perspectives on Issues in Higher Education*, *8*(1), 10–13. https://doi.org/10.1044/ihe8.1.10

Ostergren, J. A. (2011). The first year of professional service in speech-language pathology: Supervisory role, working relationships, and satisfaction with supervision. Contemporary Issues in Communication Science and Disorders, 38(Spring), 61–75.

Olmos-Vega, F., Dolmans, D., Donkers, J., & Stalmeijer, R. E. (2015). Understanding how residents' preferences for supervisory methods change throughout residency training: A mixed-methods study. *BMC Medical Education*, *15*, 177. https://doi.org/10.1186/s12909-015-0462-7

Peterson, D. A. M., Biederman, L. A., Andersen, D., Ditonto, T. M., & Roe, K. (2019). Mitigating gender bias in student evaluations of teaching. *PLoS ONE*, *14*(5), 1–10. *https://doi.org/10.1371/journal.pone.0216241*

Plexico, L. W., Plumb, A. M., & Phillips, D. E. (2017). Speech-language pathology student anxiety, expectations, and needs during clinical practicum. *Teaching and Learning in Communication Sciences & Disorders*, *1*(2), 1–16. https://doi.org/10.30707/TLCSD1.2Plexico

Procaccini, S., McNamara, K. M., & Lenzen, N. M. (2017). Leading the way with supervision training: Embracing change and transforming clinical practice. *Perspectives of the ASHA Special Interest Groups*, *2*(11), 42–46. https://doi.org/10.1044/persp2.SIG11.42

Shriberg, L. B., Filley, F. S., Hayes, D. M., Kwiatkowski, J., Schatz, J. A., Simmons, K. M., & Smith, M. E. (1975). The Wisconsin procedure for appraisal of clinical competence (W-PACC): Model and data. *ASHA*, *17*(3), 158–165.

Stalmeijer, R. E., Dolmans, D. H. J. M., Wolfhagen, I. H. A. P., Muijtjens, A. M. M., & Scherpbier, A. J. J. A. (2010). The Maastricht Clinical Teaching Questionnaire (MCTQ) as a valid and reliable instrument for the evaluation of clinical teachers. *Academic Medicine: Journal of the Association of American Medical Colleges*, *85*(11), 1732–1738. https://doi.org/10.1097/ACM.0b013e3181f554d6

Stalmeijer, R. E., Dolmans, D. H. J. M., Wolfhagen, I. H. A. P., & Scherpbier, A. J. J. A. (2009). Cognitive apprenticeship in clinical practice: Can it stimulate learning in the opinion of students? *Advances in Health Sciences Education: Theory and Practice*, *14*(4), 535–546. https://doi.org/10.1007/s10459-008-9136-0

Storage, D., Horne, Z., Cimpian, A., & Leslie, S. J. (2016). The frequency of "brilliant" and "genius" in teaching evaluations predicts the representation of women and African Americans across fields. *PLoS One*, *11*(3), 1–17. https://doi.org/10.1371/journal.pone.0150194

Tracey, T. J., Ellickson, J. L., & Sherry, P. (1989). Reactance in relation to different supervisory environments and counselor development. *Journal of Counseling Psychology*, *36*(3), 336–344. https://doi.org/10.1037/0022-0167.36.3.336

Uttl, B., White, C. A., & Wong Gonzales, D. (2017). Meta-analysis of faculty's teaching effectiveness: Student evaluation of teaching ratings and student learning are not related. *Studies in Educational Evaluation*, *54*, 22–42. https://doi.org/10.1016/j.stueduc.2016.08.007

Vallino-Napoli, L. D., & Reilly, S. (2004). Evidence-based health care: A survey of speech pathology practice. *Advances in Speech Language Pathology*, *6*(2), 107–112. https://doi.org/10.1080/14417040410001708530

Ward, E. (2019). Elizabeth Usher memorial lecture: Expanding scope of practice - inspiring practice change and raising new considerations. *International Journal of Speech-language Pathology*, *21*(3), 228–239. https://doi.org/10.1080/17549507.2019.157222

Watkins, C. E., Jr. (2014). The supervisory alliance: A half century of theory, practice, and research in critical perspective. *The American Journal of Psychotherapy*, *68*(1), 19–55. https://doi.org/10.1176/appi.psychotherapy.2014.68.1.19

Westerman, M., Teunissen, P. W., Van der Vleuten, C. P., Scherpbier, A. J., Siegert, C. E., Van der Lee, N., & Scheele, F. (2010). Understanding the transition from resident to attending physician: A transdisciplinary, qualitative study. *Academic Medicine*, *85*(12), 1914–1919. https://doi.org/10.1097/ACM.0b013e3181fa2913