Teaching and Teacher Education 127 (2023) 104096

Contents lists available at ScienceDirect

Teaching and Teacher Education

journal homepage: www.elsevier.com/locate/tate

Research paper

Collaborative discourse during coteaching: A case study of one in-service teacher's growth☆

Megan Guise [a, *], Sarah Hegg [a], Mark O'Shea [b], Nancy Stauch [a], Chance Hoellwarth [a]

[a] California Polytechnic State University, 1 Grand Avenue, San Luis Obispo, CA, 93407, United States
[b] California State University, Monterey Bay, 100 Campus Center, Seaside, CA, 93955, United States

ARTICLE INFO

Article history:
Received 23 June 2022
Received in revised form
14 December 2022
Accepted 5 March 2023
Available online xxx

Keywords:
Coteaching
Clinical experience
Collaboration
Discourse
Teacher education

ABSTRACT

This qualitative case study conducted in the United States from 2017 to 2020 examines how one in-service teacher's (IST's) coteaching practice shifted when collaborating with three different pre-service teachers (PSTs) during clinical practice. Through the analysis of recorded planning/assessing sessions, the authors identified primary discourse patterns and stance embodied by the IST. Over three years, the IST's discourse changed, shifting positioning from that of leader to teacher educator to learner/collaborator. An increase in asking for input and decrease in justifying/explaining thinking indicated a collaborative stance. Implications for other TPPs interested in shifting an IST's coteaching practice are provided.

1. Introduction

Clinical practice, originally referred to as student teaching, was traditionally experienced as the culminating exercise in a teacher preparation program (TPP),[1] often undertaken after courses in pedagogy had been completed. Over the past several decades, emphasis has been placed on conducting clinical practice concurrently with coursework. Reformers called for increases in the duration and intensity of the clinical experience (NCATE, 2010). In teacher preparation, coteaching includes a pre-service teacher (PST) working side-by-side as a colleague with the in-service teacher (IST) from the first day of the placement. The coteaching model envisions a close working relationship between the PST and IST to include such activities as collaborating on planning lessons and units, instructing in a variety of configurations that include roles for both teachers, assessing student work, and reflecting on instruction to improve the practice of both teachers. Research has shown that there is variety in the extent to which the coteaching model is implemented in line with the intent of the model and that TPPs continue their efforts to better support coteaching implementation to achieve greater levels of collaboration (Gallo-Fox & Stegeman, 2020; Guise, Thiessen, Robbins, & Habib, 2017; Soslau, Gallo-Fox, & Scantlebury, 2018).

For three consecutive years, our TPP invited coteachers to video record one of the three components of coteaching (i.e., coplanning, coinstructing, coassessing). The intent behind this opportunity was to create space for coteachers to collaborate, often being asked to view their video footage after recording and set goals for coteaching. In this article, we present longitudinal data on one IST, Tony,[2] who participated in the coteaching in action opportunity all three years, submitting two to three video clips each year of either a coplanning or coassessing session. For each year, Tony captured his collaboration with a different PST, working across those three years with three different PSTs. In coding and analyzing this video data and corresponding lesson and assessment artifacts, we explored the following research questions:

☆ This research was supported by the United States Department of Education Teacher Quality Partnership Grant Program [Grant Number: U336S180010, 2018].

* Corresponding author.
E-mail addresses: meguise@calpoly.edu (M. Guise), shegg@calpoly.edu (S. Hegg), moshea@csumb.edu (M. O'Shea), nstauch@calpoly.edu (N. Stauch), choellwa@calpoly.edu (C. Hoellwarth).

[1] Teacher Preparation Programs (TPP) prepare candidates to obtain an initial teaching credential through successful completion of course- and fieldwork.

[2] All names are pseudonyms.

https://doi.org/10.1016/j.tate.2023.104096
0742-051X/

- In what ways does an IST's coteaching practices stay the same or evolve over a three-year time period?
- What does IST discourse and positioning reveal about coteaching implementation and levels of collaboration?
- What can a TPP do to support an IST's implementation of coteaching?

We begin this article with a brief summary of research on clinical aspects of teacher preparation and the coteaching model in particular. We situate our study in previous research on cogenerative dialogue, identifying characteristics of collaborative discourse. We describe the data collected over three years and our approach to coding and analyzing coteacher discourse. We then show the primary patterns of discourse and stance embodied by the IST (Tony) when working with three different PSTs. In the findings and discussion sections, we argue that over the three-year period, Tony's discourse changed, shifting his positioning from that of leader (year one), to teacher educator (year two), and finally to several instances of learner/collaborator in year three. We discuss how an increase in asking for input and a decrease in justifying/explaining thinking was indicative of a collaborative coteacher stance, and hypothesize what led to this shift, grounding our ideas in coteaching supports provided by our TPP. We conclude with implications for other TPPs interested in shifting coteacher practice. Although only one case study is presented, this study contributes to existing coteaching research in that it presents data across three years, a longer duration than most studies. This research deepens the conversation around coteaching implementation by arriving at observable attributes, specifically in regard to IST high-leverage discourse practices. Furthermore, this research provides guidance on how an IST who may at first be more aligned with a traditional sink-or-swim model can be supported by a TPP to utilize more collaborative discourse in line with the intent of the coteaching model.

1.1. Literature review

Investigators have suggested that a variety of factors may contribute to the success of clinical practice in preparing PSTs for teaching careers. These include the duration and intensity of the experience, tasks to be performed by the PST alone or in concert with the IST, and the nature of the relationship between both teachers (Ronfeldt & Reininger, 2012). In a comprehensive report, Darling-Hammond & Bransford (2007) posit that the ideal clinical practice within a teacher training program includes "purposeful coaching from an expert cooperating teacher in the same teaching field who offers modeling, coplanning, frequent feedback, repeated opportunities to practice, and reflection upon practice" (p. 409).

The relationship between the PST and IST and the work they do together has been investigated as a central aspect of clinical practice (Lee et al., 2012). The impact of an IST may extend beyond the mere transmission of technical skills to the PST. When PSTs work closely with an influential IST over an extended period of time, the impression made on the PST may extend beyond the acquisition of teaching skills to socialization to the teaching profession, career choice satisfaction, perceptions of a teacher's professional role, philosophy of teaching, and, importantly, the desire to continue in teaching (Hamman, Fives, & Olivarez, 2007). The recognition of clinical practice as an essential component of teacher education led to an increase in the duration and intensity of this experience, including school-based clinical experiences concurrent with coursework. The coteaching model of the student teaching experience emerged during this process (Bacharach, Heck, & Dahlberg, 2010).

After coteaching was introduced as an alternative to the sink-or-swim model of student teaching, the relationship between the PST and IST during the experience drew the attention of researchers who viewed this new model with interest. Historically, the IST within traditional student teaching was positioned as an evaluator and superior, with the PST taking on a subordinate role, often mimicking the IST's practices (Beck & Kosnik, 2002; Koerner, Rust, & Baumgartner, 2002; Rozelle & Wilson, 2012; Valencia, Martin, Place, & Grossman, 2009). Although ISTs often were positioned as evaluators in the traditional student teaching model, this model also included ISTs who viewed themselves as mentors. Research on mentoring during clinical practice has identified effective mentoring practices including support and autonomy; opportunities for genuine dialogue; and collaborative planning, teaching, and reflecting (Tomlinson, Hobson, & Malderez, 2010). Building off of these mentoring practices, the coteaching model differentiated itself by viewing both teachers as learners in a collegial relationship, suggesting the need to identify and train ISTs in a broad repertoire of professional and interpersonal skills. Researchers began the process of identifying the essential skills, knowledge, and professional dispositions needed by ISTs to establish an effective working relationship with the PST wherein both teachers "learn from teaching" rather than "learn for teaching" (Cochran-Smith & Lytle, 1993).

The nature of the working relationship between the PST and IST during a coteaching placement may be viewed through the lens of theories of collaborative learning during clinical practice for a variety of professional fields. Schutz (1958) proposed an interpersonal behavior theory for group learning that included three constructs: inclusion, control, and affection. Inclusion speaks to the process of welcoming and accepting another person in a collaborative learning endeavor where roles and identity are established. Control looks to the balance in decision making and how each member of a learning group influences the other. Affection refers to a willingness to disclose one's thinking, reasoning, and feelings during collaborative discourse.

Tobin (2006a) proposed that collaborative learning achieved by pairs of working professionals arises when cogenerative dialogue results in a balance of contributions raised by each partner in a professional learning dyad. Essentially, the ideal outcome from cogenerative dialogue is two teachers learning from each other (Tobin, 2006b). When cogenerative dialogue is achieved during coteaching interactions between a PST and IST, suggestions regarding possible classroom actions arise that may improve the learning environment for students (Murphy & Carlisle, 2008).

Dialogic teaching, a pedagogical approach that seeks a balance of contributions between a teacher and learners, recognizes the role of social interaction and dialogue in the learning process (Lyle, 2008). When an IST adopts a dialogic approach, there is less emphasis on conveying information and more emphasis on the collaborative construction of knowledge and understandings through discourse with the PST. Principles of dialogic teaching, built upon theories of the social context of learning, include attention to the contributions of both the teacher and student as collaborative learners (Alexander, 2017).

Jörg (2004) developed a theory of reciprocal learning that includes both interpersonal exchanges within the relationship and the intrapersonal aspects that occur outside of professional dialogue, typically reflection on observations of teaching practice by a partner and reflections on peer coaching dialogues. He observed that innovation and self-reinforcing mechanisms tend to arise during intrapersonal reflections and less so during observations and dialogue. Zwart, Wubbels, Bolhuis, and Bergen (2008) studied collaboration and reflection of teachers in learning dyads as they undertook a year of reciprocal teaching and observation activities. The teachers reported that learning about teaching occurred more frequently during reflections about coaching conversations but not

during coaching conversations or during the observation of a colleague.

For coaching conversations that may occur when planning together, Gallo-Fox and Scantlebury (2015) looked closely at the coplanning of lessons of PSTs and ISTs. Opportunities for two teachers to work together in lesson planning may be limited by the constraints of the school day, but PSTs benefit when their coteacher contributes to the planning process and helps them to see the complexities of this quotidian activity. Some PSTs have reported difficulties in attaining equal participation during coplanning sessions and have identified not knowing what their role should be in relation to the IST (Montgomery & Akerson, 2019). Guise et al. (2017) examined the relationships that develop between PSTs and ISTs during a coteaching placement and the prospects for the enactment of a reflective, cogenerative learning relationship. ISTs who recall their own clinical practice as a power dynamic where the IST models and explains effective instructional practices to the PST may experience challenges adapting to a new role as a collaborator and colleague during a coteaching experience. Newell (1996) posits, "If teachers are expected to use collaboration and reflection in their professional practice it is important that they experience it in their teacher preparation program" (p. 567).

As the coteaching model of teacher preparation clinical practice continues to evolve, investigators and practitioners will want to know the salient factors of the coteaching model that lead PSTs to acquire teaching readiness and ISTs to experience continuing professional growth. There is an implicit assumption that the relationship between a PST and IST in a coteaching placement is substantially different from the conventional mentoring and explaining relationship typically seen in a conventional student teaching relationship. Coteaching envisions a pre-service clinical experience where both teachers experience increases in partnership and mutual engagement (Guise, Hegg, & Robbins, 2021). Coteachers reflecting on their experiences working together in schools have reported a need for effective communication, interpersonal, and self-advocacy skills (Brinkmann & Twiford, 2012). Coteaching provides a means for overcoming teacher isolation by orienting PSTs to collaborative planning, teaching, and assessment with an IST and university supervisor. During formal discussions, PSTs may engage in cogenerative dialogue with their colleagues and experience a constructive and collaborative learning experience regarding essential teaching practices (Scantlebury, Gallo-Fox, & Wassell, 2008). Both the PST and IST may develop collaborative and adaptive teaching expertise as they move in and out of leadership roles during the planning, instructing, and assessment activities of their partnership. As a result of mutual reflection activities, they strengthen their adaptive teaching expertise that includes enhance awareness of student needs and instructional context variables (Gallo-Fox & Stegeman, 2020).

2. Methodology

2.1. Research context

The TPP for this study was a secondary post-baccalaureate credential program in the United States. This study included longitudinal data on one IST who hosted PSTs enrolled in a secondary credential program at the TPP across three academic years. PSTs enrolled in the secondary program completed three quarters of coursework (each quarter equaling an 11-week academic session) and a yearlong clinical experience at a middle or high school. Each PST worked with an IST throughout the clinical experience, and a university supervisor observed the PST on 12 occasions.

During quarter one (fall), PSTs were at their school site all day on Tuesdays and Thursdays and were actively involved in coinstructing and supporting small groups of students. For the second quarter (winter), PSTs were at their school site every day for two full periods and one planning period. During this quarter, PSTs collaborated on planning, instructing, and assessing. For the third and final quarter (spring), PSTs were at their school site all day, every day and continued to collaborate on planning, instructing, and assessing. During the third year of this study, the final quarter of clinical experience was in remote modality as a response to the COVID-19 pandemic.

Coteaching support for all three years included quarterly workshops. During the first year of the study, the TPP implemented a routine of coteaching newsletters emailed twice-a-month to supplement workshops, and in the final year, a robust coteaching website was available to pairs with resources (e.g., tips for coplanning efficiently, characteristics of effective coinstructing). Video footage of coteaching exemplars were incorporated into workshops and newsletters beginning in the second year.

2.2. Coplanning & coassessing in action opportunity

In winter of the first year of the study, the TPP sent out a call to all secondary and elementary coteaching pairs to submit videos of them engaged in coplanning, coassessing, and/or coinstructing. The opportunity was called "Coteaching in Action."

For coplanning, pairs were asked to video record two 10–20 minute planning sessions. Planning sessions consisted of both teachers sitting down to discuss plans for a current or upcoming unit and were intended to capture what coplanning looked like for each pair. For coassessing, pairs were asked to video record two 10–20 minute conversations where they reflected on a lesson they had just cotaught or collaboratively analyzed the results of a recent assessment and next steps for instruction. In years two and three of the study, pairs were asked to view their video after recording and individually reflect on each session. This reflection was guided by an online survey that included reflection prompts and asked coteachers to identify a highlight, a challenge, and an improvement goal for each session. Coteachers also rated their collaboration on several criteria (e.g., discourse, tone, stance, etc.) from rubric tools developed by the TPP (see Guise, Hegg, Hoellwarth, & O'Shea, 2022 for more information about the tool and development process). Pairs received a small stipend for participating.

All video sessions included in this study were recorded during a three-month period that spanned each winter and spring quarter of the academic year. This study focuses on one particular IST, Tony, who participated in the coteaching in action opportunity all three years, each year with a new PST.

2.3. Data

Data collected includes coplanning and coassessing video sessions from Tony and the PSTs for three academic years (17/18, 18/19, & 19/20). Table 1 shows the year, coteaching component, and

Table 1
Coteaching video data set.

Coteaching Pair	AY	Coteaching Component	Video #	Duration
Lauren & Tony	2017/18	Coassessing	1	14 min
		Coassessing	2	15 min
Elena & Tony	2018/19	Coassessing	1	14 min
		Coassessing	2	11 min
		Coassessing	3	12.5 min
Julie & Tony	2019/20	Coplanning	1	12 min
		Coplanning	2	13.5 min

length of each video included in this data set.

Additional data included (a) a survey the IST completed to express interest in hosting a PST, (b) a reflection survey completed individually by the PST and IST after they viewed their session video, (c) a semi-structured interview with Tony conducted at the end of the third year of the study by an external evaluation team, and (d) PST weekly reflections. Although our primary analysis and findings are grounded in the transcripts of the recorded coplanning/coassessing sessions, we analyzed these additional data sources for triangulation purposes. For example, the PST weekly reflection included the following question: *When given the opportunity this past week, to what extent was your cooperating teacher willing to incorporate new ideas/techniques?* The PST provided a rating of 1 (not accepting of new ideas) to 5 (always takes new ideas into consideration) each week. For the purpose of triangulation, we found the average in response to this question for each PST and compared to the coded transcripts of the coplanning/coassessing sessions specific to *asking for input* to determine whether a similar pattern emerged. For the post-video reflection survey and semi-structured interview, we examined these data for confirmation or contradiction of what the coplanning/coassessing sessions revealed about Tony's discourse and role.

2.4. Data analysis

All videos of coplanning and coassessing sessions were transcribed and coded for discourse: purpose of talk. Purpose of talk codes focused on the purpose behind the dialogue. This strand had seven codes: providing context, asking for input, explaining/justifying thinking, reflecting, summarizing, expressing agreement/disagreement, and offering encouragement (See Table 2). Purpose of talk was also coded in relation to who was engaging in the purpose of talk (e.g., PST or IST). For example, when coding for asking for input by either coteacher, we applied this code to any moment when a coteacher shared an idea and posed a question that invited feedback. This code also occurred when the coteacher presented a problem and asked for ideas on how to resolve the problem.

All video data were double coded to achieve inter-rater reliability. Any coding disagreements were discussed and resolved, and agreed-upon codes were then inputted into a spreadsheet for quantification. Codes were quantified for all transcripts and pairs. Analysis of quantified codes included finding averages for each pair across the video sessions and determining total percentage of discourse codes used by each coteacher.

After coding for purpose of talk and quantifying these codes, the research team discussed how the discourse in each video session positioned Tony and his overall stance adopted in each session. Coteacher stance was defined using a coassessing rubric (See Table 3), a tool developed by Guise et al., 2022 in a previous study.

Transcripts from all sessions were also analyzed for word count and balance of talk. We determined balance of talk as the average number of words spoken per turn for each coteacher role. This was calculated by adding the total number of words spoken by each coteacher in a session and dividing that total in half by the number of speaking turns to obtain an average.

3. Results

In the sections that follow, we compare the IST's (Tony's) coded discourse across the three years of collaboration with a different PST each year. We begin by providing a brief background on each coteaching pair and the focus of their video recorded sessions. Then, we present findings on the two primary changes in Tony's

Table 2
Discourse purpose of talk codes: Descriptions & examples.

Discourse Purpose of Talk Code	Code Description
Providing Context	Statements that are primarily based in description and/or explanation and focus on providing background information. Background information could be about logistics of a lesson or assessment, information on a student or school site, previous unit etc.
Asking for Input	A coteacher shares an idea and then poses a question that invites the other coteacher to provide feedback or offer a different idea OR the coteacher presents a problem and asks for ideas on how to resolve the problem.
Explaining/Justifying Thinking	Statements where the coteacher makes visible their thinking, justifies an idea shared/decision made, or provides explanation of reasoning.
Reflecting	Coteacher engages in reflection on practice or assessment, identifying what worked, what didn't work about previous lessons, results of student assessment, etc. Discourse typically references the past and/or is informing future planning.
Summarizing	Coteacher provides a recap of what was discussed or a decision that was made; this summary serves as a review and clarity on next steps.
Expressing Agreement/ Disagreement	Coteacher expresses agreement/disagreement with an idea shared or a decision made; discourse builds on to the idea to explain agreement or provides an alternative idea/decision.
Offering Encouragement	Coteacher provides praise to the other coteacher (recognizing a strength or something done well) or explains that something is hard/challenging and that the coteacher is doing a good job considering the challenge.

Table 3
Coassessing rubric: Coteacher stance criterion.

Criterion	Low-Level	Medium-Level	High-Level
Coteacher Stance			
Guiding Question: What is the positioning/role of the coteacher?			
Positioning/role of the in-service teacher	In-service teacher is the leader, driving the conversation and decisions with little justification or In-service teacher relinquishes most of the control to the pre-service teacher	In-service teacher is the teacher educator, providing modeling and facilitating pre-service teacher learning	In-service teacher is a collaborator, posing authentic questions, sharing ideas, and positioning themselves as a learner
Positioning/role of the pre-service teacher	Pre-service teacher is the follower – observing and listening – with contributions mainly in response to the in-service teacher or Pre-service teacher is the leader, driving the conversation and decisions with little justification, sometimes not open to the mentoring/feedback of the in-service teacher	Pre-service teacher is a student, asking questions to clarify the thinking and decisions of the in-service teacher	Pre-service teacher is a collaborator, posing authentic questions, sharing ideas, and positioning themselves as a learner

Table 4
Background on video-recorded session by coteaching pair.

Coteaching Pair	Year of Study	Coteaching Session	Background on Video-Recorded Session
Lauren & Tony	Year 1	Coassessing	-7th grade English -Coassessing session one: Analysis of a chapter quiz for *Strange Case of Dr. Jekyll & Mr. Hyde* (Stevenson, 1886) that required short-answer responses with textual evidence -Coassessing session two: Analysis of a group poster for chapter one of *The Pearl* (Steinbeck, 1947)
Elena & Tony	Year 2	Coassessing	-7th grade English -Coassessing session one: Analysis of an opening paragraph for a persuasive essay; students asked to include a hook, thesis, and bridge -Coassessing session two: Analysis of a timed write where students responded to a prompt about the character Kino from *The Pearl* (Steinbeck, 1947) -Coassessing session three: Analysis of short-answer response questions where students identified textual evidence to support character analysis
Julie & Tony	Year 3	Coplanning	-7th grade English -Coplanning session one: Julie shares a draft essay prompt and rubric on relating fate and free will in *The Pearl* -Coplanning session two: Tony shares a draft summative assessment sheet for *The Pearl*, an assessment needing revision when teaching online; session two occurred virtually via zoom

discourse that occurred when looking across the three years. To illustrate these changes, we present both quantitative data showing the results of the quantified coded data as well as qualitative data in the form of video transcript excerpts. In addition, we reference additional data sources (e.g., semi-structured interview) to support these findings.

3.1. Background on coteaching pairs

Year one of this study was the first time Tony had hosted a PST in over nine years. Tony's previous experience hosting was before the coteaching model was adopted by the TPP.

Over the years, Tony expressed the following reasons for wanting to host a PST: "I find the process/experience rewarding," "Collaboration with the candidates is incredibly rewarding and helps me grow as a teacher," and "It is a wonderful way to learn."

In all three years of the study, PSTs were placed with Tony for a yearlong clinical practice placement. PSTs were in their second and third quarters of their clinical placement when sessions were recorded, beginning with half days during second quarter and transitioning to full days during quarter three. All three PSTs were obtaining teaching credentials in English. Demographic data on PSTs were not collected. See Table 4 for an overview of the type of collaboration that was captured in the video-recorded sessions (e.g., coplanning or coassessing) as well as the content that was the focus of each session.

4. Shifts in Tony's discourse when collaborating over three years

4.1. Instances of Tony asking for PST input

Across the three years, there was an increase in instances of Tony *asking for input* from the PST. As depicted in Fig. 1, Tony's discourse in the first year when coteaching with Lauren included 17.9% of his discourse coded as asking for input, and in the second year when working with Elena, this frequency increased to 21.6%. Finally in the third year when working with Julie, Tony's discourse included 28.26% instances of asking for input.

In addition, PST weekly reflections showed an average increase in IST openness to PST ideas when responding to the following question: *When given the opportunity this past week, to what extent was your cooperating teacher willing to incorporate new ideas/techniques?* Table 5 shows the average score for each PST in the study based on a scale of 1–5, where 5 = always takes new ideas into consideration and 1 = not accepting of new ideas.

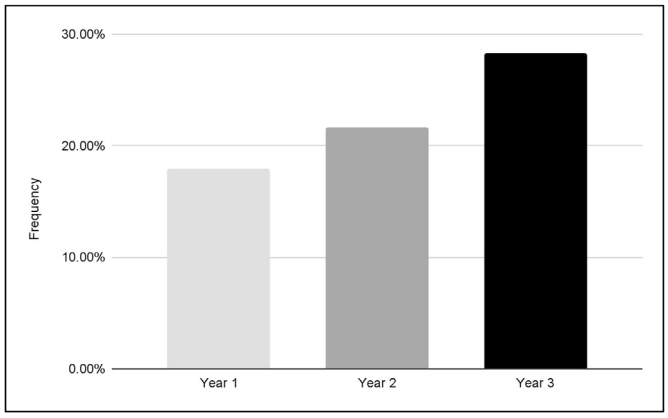

Fig. 1. IST discourse frequency: Asking for input.

Table 5
IST openness to PST ideas: Average PST reflection score.

PST Name	IST Openness Average
Lauren	4.60
Elena	4.67
Julie	4.96

Not only was there an increase in coplanning/coassessing sessions in instances of Tony asking for input, but there was also a difference across the three years in the type of input he requested. In the first year, Tony was the primary voice in the coassessing sessions, and his discourse mainly consisted of direct explanation/analysis and declarative statements that provided context for the assessment. On occasion, Tony shared his thinking and analysis while Lauren listened and contributed some analysis and/or assent. When Tony did ask for input, this input pertained to the logistics of the coassessing session itself or when determining a grade for the student work sample. The transcript below from session one shows Tony asking for input primarily for the purpose of moving forward the coassessing session, not necessarily with a purpose that is inviting collaboration or Lauren's voice:

Tony: We'll obviously give credit if we feel like they read the selection or at

least tried to address the question. Wanna talk about the second question really fast?

Lauren: Sure. The second question is …

In this transcript, Tony made a declarative statement about how they would approach grading the work samples. Tony then checked in with Lauren to see if she wanted to continue by analyzing the second question to which Lauren agreed. Lauren then proceeded to read the next question aloud following Tony's prompting.

In session two, Tony asked for a slightly different type of input from Lauren, this time input regarding the overall score for the student work sample:

Tony: So overall, what do we think? Because I think they've got a lot of good things here. 20 points?

Lauren: I think they did a lot more than I even asked them to do, so I would say 20 out of 20.

Tony: We will — so we will give them 20 out of 20.

When asking for input on the score, Tony first put forth his thoughts on the score ("20 points?"). Although phrased as a question, this question could be perceived as somewhat leading since Tony put forth his score first, to which Lauren expressed agreement ("20 out of 20").

When working with Elena in the second year, Tony continued to operate in similar ways when asking for input, primarily centering his inquiry in logistics rather than inviting collaboration. However, there was a slight increase in the frequency of Tony asking for input as well as the type of input he requested. In the first session, Tony and Elena focused their analysis on the opening paragraph of a persuasive essay assigned to students, which asked students to include a hook, thesis, and bridge. In the transcript below, Tony and Elena discussed student work and collaborated to decide on a grade for the essay submitted.

Tony: … What do you — I think I jumped in there, but what do you — what do you think of the thesis —

Elena: No. I — well, yeah. That was the part I was gonna mention. I like the anecdote as well.

Tony: Mm-hmm. But 'I am for school being shorter than usual.' I'd say is her thesis, but it's not really clear as to what that looks like.

Elena: I mean, I wanna say she's — she's trying to say it in a nutshell, but I still think it could be a little more clear as far as what she means by that —

Tony: So, what are we thinking?

Elena: She has her two reasons —

Tony: Do we think we wanna give her a six or a five? Or I mean — what I would do is — she says first and second —

Elena: Mm-hmm.

Tony: I would — those are almost like transition words. So I might have her get those out of there — But what do you think? A five or a six on this one?

Elena: I'd say a five just because I know that she — with that feedback, she'll actually go back and change it.

Tony: Yeah. We'll give her a five but get — tell her how easy it'll be for her to earn that point back. So, we'll put, 'See us to fix thesis.'

In the above transcript, Tony paused in his analysis of the student work to create space for Elena to add her own analysis. When asking for input, Tony appeared to recognize that he was perhaps leading the analysis ("I think I jumped in there") and posed a question to Elena to elicit her thoughts ("What do you think of the thesis?"). Tony continued to ask for input, posing open-ended questions such as "What are we thinking" and "What do you think," making use of both "we" and "you" pronouns. Tony also asked for input on the overall score ("What do you think? A five or a six on this one"). Similar to the first year, there was evidence that Tony still guided this input by providing his own analysis and explanation first ("'I am for school being shorter than usual,' I'd say is her thesis, but it's not really clear as to what that looks like"). In the second year, however, Tony asked for Elena's input more frequently, and Elena's responses, which did express agreement with Tony ("It [the thesis] could be a little more clear"), also included her own explanation and analysis.

Tony's discourse in the third year had the highest frequency of asking for input, and invited input and feedback to support his own professional development. In the following transcript, Julie and Tony met in a virtual session over zoom, collaborating to revise the four essay prompts that Tony had drafted for the class final on *The Pearl.*

Tony: … I really need your help with as far as it [the fourth essay prompt] just doesn't make sense right now. But I think a lot of them will want to do the essay because we've been doing so many essays —

Julie: Okay.

Tony: But let's talk about each of these and you can give me your thoughts on what I need to change. So, the first one says, 'Analyze the characters of Juana and Kino? How could this character be a hero or tragic character? Discuss his or her strengths and weaknesses.' I think that — What do you think about that one? I think that that's just pretty easy as far as the two main characters. Any thoughts?

Julie: Yeah. I'm wondering if they''ll be familiar with the idea of a tragic character. I mean, I'm sure that they know what tragic means, but I think —

Tony: Okay.

Julie: knowing the kind of questions that I've been getting lately, they might be confused on that. So, rewording some of that. Maybe 'How could this character be a hero or a tragic character?'

Tony: I'm just putting myself a note that I'm going to add a description of like what makes a character tragic or really go into, and then I'll just highlight that and then go back before we put that in there. Okay.

In this transcript, there was a shift in Tony's approach to asking for input from the PST compared to the previous two years. Similar to the second year, Tony asked an open-ended question when eliciting input, but this time, Tony positioned himself as needing feedback from his coteacher ("I really need your help") and framed his question with the goal of revision ("But let's talk about each of these, and you can give me your thoughts on what I need to change."). Julie then provided recommendations on what could be improved about the essay prompt, grounding this recommendation

in what she knew about their students ("I'm wondering if they'll be familiar with the idea of a tragic character"), suggesting a "rewording" of that prompt. Tony showed receptiveness to this input and made a note to himself to go back and revise this prompt based on Julie's suggestions.

Looking across the three years, Tony's discourse not only revealed an increase in the number of times he asked for input from the PST, but there was a qualitative shift in how he asked for input. By the final year, Tony positioned himself as open to the feedback of his coteacher with the goal of revising his own thinking. No longer was the request for input related to the logistical aspects of the collaborative session itself, but now this input was content driven. Responding to the reflection survey after viewing the first video-recorded session of year two, Tony commented, "The highlight was working with a partner to really look at each student's work and determine if they met the goal. Sometimes grading can be a lonely, individual job where you end up questioning your teaching strategies and grading habits. It is nice to have a partner to discuss these things with for clarity and useful debate." In this comment, Tony highlights the collaboration and discussion that was also evident in the coded transcripts.

4.2. Instances of Tony explaining/justifying his thinking

We noticed an inverse shift over time for Tony's discourse in coplanning/coassessing sessions in frequency of *explaining/justifying thinking*. Tony's discourse in the first year when coteaching with Lauren included 36% explaining/justifying thinking, a frequency that decreased to 32% in the second year, and finally in the third year of the study only 19% of Tony's discourse was coded as explaining/justifying thinking (See Fig. 2).

In the transcript below Tony, working with Lauren in session one of the first year, provided explanation about and justification for his process at arriving at a grade for a particular student essay.

> Tony: Alright, so here's the interesting thing. There was a death, but it wasn't in the pages we asked them to read. So, we have to decide. He did talk about the death and he knows a lot about how the death happened. And he was very specific with the cane and everything.
>
> Lauren: Yeah. Mmhm.
>
> Tony: But, he didn't address it. And here's where I'm gonna – we're gonna mark him down or I think we should. Is that it says 'From the chapter 'Remarkable Incident of Dr. Lanyon.'
>
> Lauren: Yeah.

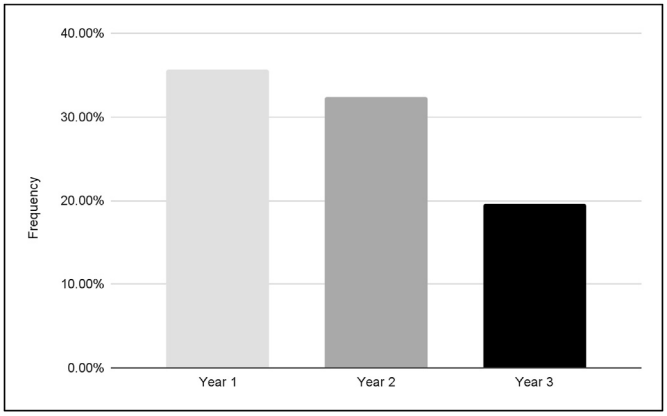

Fig. 2. IST discourse frequency: Explaining/justifying thinking.

> Tony: So, he's not in that. So, what we're gonna do –
>
> Lauren: Circle that?
>
> Tony: Circle it. We're gonna give him half the points. But we're gonna allow him to redo it and address the right – the correct pages. Because he … that's another, you know, that's a case of did my question confuse him? Is it because he didn't check the part about which chapter it was? But then that's kinda on him because it does say which chapters. So, mark him down because he didn't really answer the right part, but we will also give the opportunity to redo it.
>
> Lauren: Okay.

In this transcript, Tony provided ample rationale for grading student work, making explicit his thinking to Lauren. But his purpose and quantity of talk left little room for Lauren to add her voice or own assessment of student work, therefore limiting collaboration. The pair arrived at a decision with little input from Lauren. Tony simply stated, "We're gonna give him half the points" and later instructed Lauren to "Mark him down." There was no pair discussion or agreement found for this grade; rather, it was a directive from Tony.

The following transcript shows Tony explaining/justifying his thinking when working with Elena in year two.

> Tony: The next question says, 'Which line shows how Kino felt about his canoe?' He [the student] found the line, 'There was a sorrow in Kino's rage.' And I kinda like it. I mean it's – it kinda shows that he actually sees that. I don't know if it really ties into the canoe though, but we'll give him credit.
>
> Elena: Yeah. And then format wise, I think they still need to be taught how to put the quotation marks, but –
>
> Tony: Sure. I can actually add the quotation marks.
>
> Elena: He did pull it out of the text though**,** so that's good.
>
> Tony: That is good.

As in year one, Tony's explanation was directive, but Elena expanded on his initial statement – asserting her own opinion about the student work – and Tony took up her input. Tony's discourse was still explaining/justifying thinking, but the tone was more tentative ("I kinda like it. I mean it's kinda …"), which may have opened a space for Elena to add her thoughts.

In contrast to the previous two years, year three had several examples of Tony explaining/justifying thinking in a way that was less directive and led the pair into collaborative decision making. In the transcript below, Tony's discourse blurs the line between asking for input and explaining/justifying thinking as he discussed with Julie how to modify an assignment for distance learning. Tony put forth the idea of having the students video a monologue from the perspective of one character and provided an explanation of his thinking.

> Tony: Now, the video I used to have them do in partners. So what if we said –what if I changed this to more of … not a soliloquy, but more like an ongoing monologue of them taking on the character and explaining what – telling the story from one character's point of view.
>
> Julie: That's good. Would you want any kind of written element in it with the script or anything?
>
> Tony: I don't think – you see – and that's where I don't know. What do you think? Because I think if they can – if they can just

basically say like, 'Hi. I'm Kino, and I want to tell you the story of what happened.'

Julie: Yeah.

Tony: … What I wanted – what I want to avoid … is them [sic] saying, 'Hi, I'm going to tell it from Kino Tito's standpoint' because it gets a little weird.

Julie: Yeah –

Tony: Like if I make a note saying, 'Monologue from Kino or Juana,' and then I – we can draw that out later.

Julie: Yeah.

Tony's trust in Julia's judgment in meeting their students' needs during this difficult time was evident throughout this second session. The second session also showed the growth in Julia as an educator. She was confident in her abilities as a teacher, and with Tony's inclusive and welcoming discourse, she was an important contributor to the modification of the summative assessment.

Looking across the three years, the amount of explaining/justifying thinking instances in Tony's discourse gradually decreased. As we would expect from any IST mentor, his discourse included explaining/justifying thinking in each session, but as with asking for input, there was a qualitative shift in intention when he was explaining/justifying thinking. In the final year, Tony positioned himself more as a collaborator, inviting the PST's voice and providing explanation that was less directive and more open to feedback. Evidence of this shift in positioning was also seen in the semi-structured interview when Tony was asked to comment on why he was open to recording and viewing his coplanning/coassessing sessions: " … I think it's just good practice to be able to see how you're communicating with each other and is it back and forth? Is it equal? So I just think it was a good experience as far as keeping yourself in check as far as how things are going with it." In this interview, Tony expressed awareness of how much he was contributing and whether there was space for PST input in these collaborative sessions.

4.3. Additional purpose of talk utilized by Tony

In looking across the three years of coplanning/coassessing sessions, there were some purpose of talk codes that remained stable or did not show a clear shift. For example, Tony *provided context* pretty consistently across the three years (21.4%–26.1%). Often discourse coded as providing context appeared more for the "viewer" of the recorded collaboration session and less about providing context to each other as coteachers.

There were also several purpose of talk codes that remained at 5% or below across the three years, including *reflecting* (0%–3.6%) and *offering encouragement* (0%–5.4%). Although these two discourse codes remained fairly stable across the three years and were all below 5%, it is interesting to note that in the second year, there was no evidence of Tony engaging in reflection while in the first year there was no evidence of Tony offering encouragement.

Purpose of talk codes for *expressing agreement/disagreement* and *summarizing* remained stable for the first two years but saw a shift during the final year. For example, Tony summarized fairly equally in years one (3.6%) and two (2.7%), but there was an increase to 15.2% in the final year. Since the third year included virtual collaboration, which often required more conversation about next steps since coteachers were coordinating many logistical aspects when teaching online, there could be more impetus for Tony to summarize at the end of each collaborative session. Similarly for expressing agreement/disagreement, the first two years were fairly consistent (17.9% - to 21.6%), but the final year saw a decrease to 4.3%. See Fig. 3 for the additional purpose of talk frequencies.

Looking across all purpose of talk codes and years, one notable difference was that the final year when collaborating with Julie was the only year when Tony utilized all purposes of talk, showing the most variety in the type of discourse utilized.

5. Discussion

5.1. In What Ways Does an IST's Coteaching Practices Stay the Same or Evolve Over a Three-Year Time Period?

Discourse is an observable attribute of collaborative coteaching and can be used to make a determination about coteacher practice. In the case of Tony, some purposes of talk were stable and others seemed to have variation in a desired direction. Some purposes of talk seemed natural for Tony and were used consistently. For example, in Fig. 3 Tony consistently utilized the providing context purpose of talk across all sessions and with all three PSTs. Similarly, his use of offering encouragement and reflecting routinely stayed below a frequency of 5%. Consistent use of these particular purposes of talk may be in alignment with a more traditional view of the role of a mentor teacher. As described by Darling-Hammond & Bransford (2007), the role of an IST includes "purposeful coaching from an expert cooperating teacher in the same teaching field …" (p. 398). We can conclude from Tony's consistent use of these purposes of talk that he viewed himself as that expert, adopting a stance as an IST that was primarily that of a leader/evaluator. However, movement toward a more collaborative stance codified as cogenerative dialogue was evident in year three and made visible in the gradual decrease of explaining/justifying thinking and the simultaneous increase in asking for input when looking across each year of his mentoring practice. Tony's comments during the year three interview capture this shift: "I like both of us kind of coming up with questions, but the nice thing about working with somebody else is you can come up with questions, but you can also come up with answers to them … And so working together, it's nice to have two people … " Echoing the work of Lyle (2008), less emphasis was placed in year three on conveying information and more emphasis was placed on the collaborative construction of knowledge and understanding through discourse. This shift from year one to year three provides evidence that coteacher practice over time can evolve to be more collaborative but that even this evolution may not manifest in every area of discourse. Although Tony was more collaborative and invited PST voice in response to his questions and request for feedback in year three, he maintained leadership within the coteaching relationship, a dynamic seen in his discourse.

We saw a shift not only in quantity but also *quality* of engaging in that purpose of talk. Over the three years, Tony had a consistent pattern in conducting the collaborative sessions, setting the stage for each session and guiding the conversation around the planned task. We noticed though that his stance as a leader and a teacher educator changed over time. The purpose of the session was a major factor in what purpose of talk dominated and affected the collaborative nature of the conversations. In the third year the premise for coassessing had changed that instead of analyzing student work, each coteacher brought an assessment for feedback before administering it. This set the stage for each coteacher to ask for input and to learn from each other. This suggests the important role the framing of the collaborative session has on the discourse utilized by the IST. The second session of year three began with Tony framing this session with a request for help on the draft assessment and a desire for feedback from the PST. By framing the

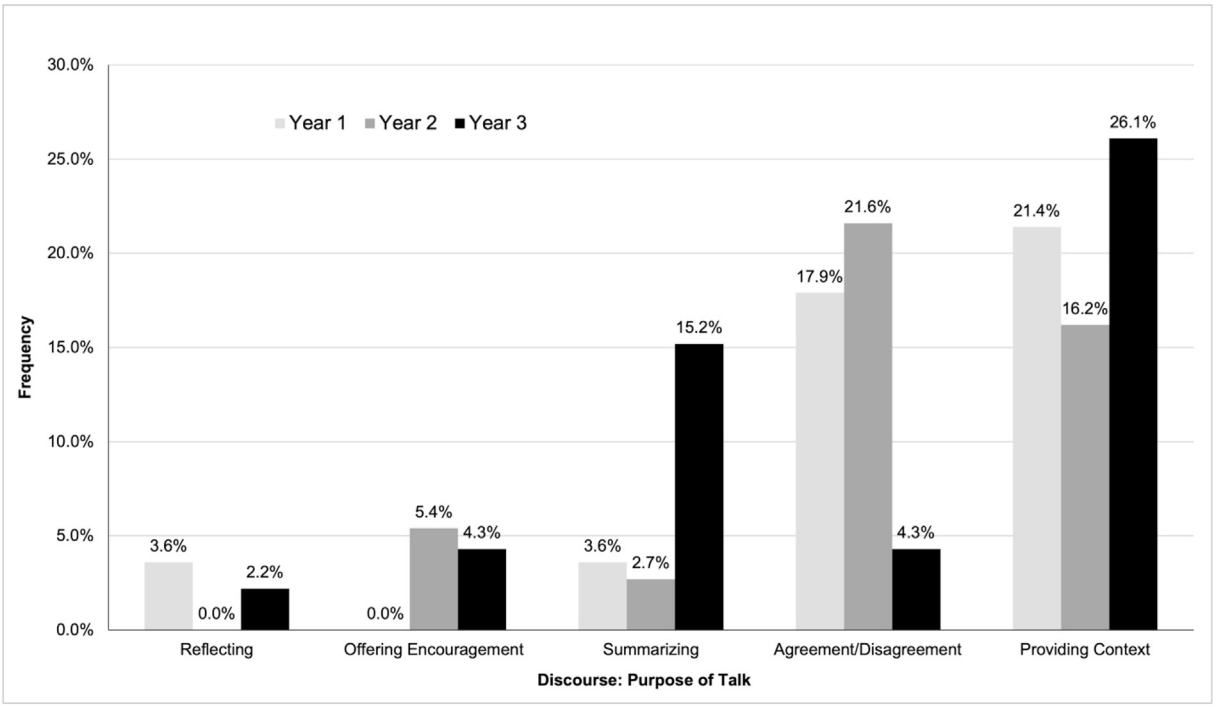

Fig. 3. IST Discourse: Additional Purpose of Talk Frequencies.

coplanning/coassessing session with the goal of feedback on their practice, we identified more opportunities for PST input compared to sessions that did not include this framing. We also saw Tony position himself as a learner and collaborator. Previous research on coteaching and teacher learning has suggested the importance of coteachers embracing the role of learner (Cochran-Smith & Lytle, 1993; Gallo-Fox & Scantlebury, 2016; Guise et al., 2017; Guise et al., 2021; Tobin, 2006b).

5.2. What does IST discourse and positioning reveal about coteaching implementation and levels of collaboration?

Despite overall stability in Tony's discourse across the three years of recorded sessions, during all three years of activity he increasingly asked for input from the PST with declining amounts of explanation/justification during this same time period. Fig. 2 shows that Tony's percentage of discourse that consisted of explanatory/justification statements declined from well over 30% of discourse to under 20% of discourse from years one to three. Also, from years one to three, Tony's requests for input rose from 17.9% to 28.16%. This pattern seemed to be concurrent with a general increase in collaborative episodes. For instance, in year one Tony had little to no instances of asking for input, and when a question was posed to the PST, it was primarily logistical in nature, prompting a response without inviting contribution or reflection such as "So should we go over a few?" (Session Two). Later in year three, Tony provided multiple requests for input. These requests were isolated across the session. For example, Tony made one request for input, "Do you wanna talk about that? Or – …" and later on in the session followed with a second request, "So, what do you think about this?" Finally, in the second session of year three, we see a chain of three requests for input (noted in *italics*) in just a brief excerpt of discourse. Tony states:

> But let's talk about each of these, and *you can give me your thoughts on what I need to change*. So, the first one says, 'Analyze the characters of Juana and Kino? How could this character be a hero or tragic character? Discuss his or her strengths and weaknesses.' I think that – *What do you think about that one?* I think that's just pretty easy as far as the two main characters. *Any thoughts?* (Session One)

This pattern of uttering repeated requests for input during relatively brief discourse episodes appeared in year three in a manner not seen in the transcripts of the prior years. It suggests a change in collaborative behavior on Tony's part. In Schutz's (1958) theory of collaborative discourse, he defined inclusion as a necessary component of a collaborative endeavor. We include the use of purpose of talk to request input as a representation of the inclusion process.

5.3. Limitations

We recognize that a possible limitation of this research study is that the IST was working with a different PST each year. Each of the three PSTs brought their own personality and sense of their role in working with an experienced IST. Each in their own right may have viewed their role differently, perhaps as a follower or a learner, rather than collaborator in a mutual endeavor of co-construction of understanding about teaching and learning. On the other hand, an IST in a TPP would normally be expected to host PSTs with different personalities over their years of service. Therefore, while this is a limitation of our study and may have impacted data collected, it mirrors the reality that exists every time an IST hosts a new PST.

The final samples of discourse collected during the third year of the study used videoconferencing rather than in-person exchanges due to constraints arising from the COVID-19 pandemic. The verbal behavior of either teacher may have been inhibited due to the need for physical isolation from each other. Collaboration and cogeneration of dialogue may have been affected by the lack of physical proximity between the coteachers in the final year of this study. In

addition, Tony and his coteacher during year three were co-designing an assessment to be implemented in a virtual teaching situation due to the ongoing pandemic. The nature of their planning was different due to the pandemic since they were planning an assessment that had never been taught virtually and therefore perhaps resulted in an authentic need for collaboration on the part of Tony.

Another limitation of this study is that the component of coteaching that was captured for year three (coplanning) was different than the component that was captured for years one and two (coassessing). Although all sessions had a focus on assessment – whether coteachers were analyzing the results of a student assessment or designing an assessment – the action of analysis versus design could elicit different types of coteacher discourse and positioning. Tony currently is hosting a fourth PST for our TPP and is videorecording coassessing sessions. We plan on examining this new data set to determine if this increase in asking for input continues or if it was an artifact of a coplanning session compared to a coassessing session.

Finally, we recognize that this case study represents the experience of one IST working with three different PSTs and therefore the results cannot be generalized. However, we hope that through the rich descriptions compiled across the three years, not only is insight gained into one TPP's local context and implementation of coteaching, but also that other TPPs may discover findings that resonate and inform their work.

5.4. Implications

5.4.1. What can a TPP do to support an IST's implementation of coteaching?

We recommend that TPPs create activities that pairs do together that provide opportunities for collaboration around something new or opportunities for the IST to receive feedback from the PST. Aligned with this recommendation, prior research on coteaching has identified the importance of disrupting the power differential and positioning both coteachers as learners (Gallo-Fox & Scantlebury, 2015; Guise et al., 2017; Guise et al., 2021). Research has also identified difficulties PSTs face in participating equally and knowing their role when collaborating with an IST (Montgomery & Akerson, 2019), often attributed to the preconceptions PSTs and ISTs hold of a traditional mentor/mentee relationship associated with older models of learning how to teach. Perhaps starting with coplanning may allow for more invitation for feedback and input from the PST, especially if planning a new lesson together. Or, having a "cold" read of assessment data where the IST comes to the collaborative session underprepared might allow for authentic questions posed in the collaborative session itself. TPPs could create a menu of activities that position both teachers as learners and attempt to equalize the level of expertise among coteachers. Pairs could then select from this menu of options and engage in the activity at their school site or during a TPP-facilitated workshop.

It may also be beneficial to have coteaching pairs view their video footage and reflect on their collaboration. Tony engaged in this reflection during years two and three of the study, and although we cannot attribute his growth in year three to this particular reflection activity, we do believe that the activity has potential to encourage coteachers to be more intentional about their collaboration and set goals for growth. Pairs could be provided with reflection prompts and a rubric for analyzing their discourse (for one such rubric, see Guise et al., 2022). After engaging in this individual reflection, pairs could determine a goal for improving their collaboration, and the TPP could provide resources that support this particular development goal.

This research has encouraged us to reflect on the support we provide to coteaching pairs. Future coteaching workshops will include video footage of coteaching pairs coplanning/coassessing to highlight "high-leverage" purposes of talk that we think are important in shifting coteacher discourse. A TPP seeking to implement coteaching could plan a professional development experience for ISTs that offers video exemplars that display ISTs effectively using reflection, offering encouragement, asking for input, and expressing agreement/disagreement practices. ISTs could then be asked to reflect on their own contributions and discourse used in collaborative sessions and set goals.

We also recognize the important role the PST plays in the coplanning/coassessing sessions. Although not a primary focus of this study, we wonder what support could be provided to PSTs to be prepared to engage in this type of collaboration. A TPP could provide a foundational workshop to PSTs on the coteaching model, unpacking the role of the PST in this collaborative relationship. PSTs could be provided with sentence frames/starters that they could utilize to prompt an IST's reflection on their practice and strategies for sharing their own ideas in collaborative sessions. This foundational workshop could also explore different scenarios associated with collaboration challenges and techniques for resolving these challenges.

6. Conclusion

In conclusion, this study confirms that with more time and practice with the coteaching model, shifts in IST practice can occur with the IST embracing their dual role as a learner/collaborator and mentor/coach. While we acknowledge that implementation of coteaching during clinical practice may present challenges to an IST (e.g., demands on time), we posit that the learning benefits for the IST and PST justify the model. TPPs must continue to provide enriching professional development around the model of coteaching for growth can be small and slow without guidance.

Data availability

The data that has been used is confidential.

References

Alexander, R. (2017). Developing dialogic teaching: Process, trial, outcomes. August. In *17th biennial EARLI conference, 31*Tampere, Finland.

Bacharach, N., Heck, T. W., & Dahlberg, K. (2010). Changing the face of student teaching through coteaching. *Action in Teacher Education, 32*(1), 3–14. https://doi.org/10.1080/01626620.2010.10463538

Beck, C., & Kosnik, C. (2002). Components of a good practicum placement: Student teacher perceptions. *Teacher Education Quarterly, 29*(2), 81–98.

Brinkmann, J., & Twiford, T. (2012). Voices from the field: Skill sets needed for effective collaboration and co-teaching. *International Journal of Educational Leadership Preparation, 7*(3), 1–13.

Cochran-Smith, M., & Lytle, S. L. (Eds.). (1993). *Inside/outside: Teacher research and knowledge*. Teachers College Press.

Darling-Hammond, L., & Bransford, J. (Eds.). (2007). *Preparing teachers for a changing world:What teachers should learn and be able to do*.

Gallo-Fox, J., & Scantlebury, K. (2015). 'It isn't necessarily sunshine and daisies every time':Coplanning opportunities and challenges when student teaching. *Asia-Pacific Journal of Teacher Education, 43*(4), 324–337. https://doi.org/10.1080/1359866X.2015.1060294

Gallo-Fox, J., & Scantlebury, K. (2016). Coteaching as professional development for cooperating teachers. *Teaching and Teacher Education, 60*, 191–202. https://doi.org/10.1016/j.tate.2016.08.007

Gallo-Fox, J., & Stegeman, L. (2020). Coteaching in early childhood clinical field experiences: A cross-case study of learning affordances. *Teaching Education, 31*(3), 298–322. https://doi.org/10.1080/10476210.2018.1561661

Guise, M., Hegg, S., Hoellwarth, C., & O'Shea, M. (2022). Support for coteaching in clinical practice: The development and use of a coassessing rubric for collaboratively analyzing student learning. *The New Educator, 8*, 148–178. https://doi.org/10.1080/1547688X.2022.2038746.

Guise, M., Hegg, S., & Robbins, A. (2021). Learning together through coteaching coaching: A model of support for coteaching pairs in clinical practice. *Teaching and Teacher Education, 100*. https://doi.org/10.1016/j.tate.2021.103278.

Guise, M., Thiessen, K., Robbins, A., & Habib, M. (2017). Continuum of co-teaching implementation: Moving from traditional student teaching to implementing co-teaching. *Teaching and Teacher Education, 66*, 370–382. https://doi.org/10.1016/j.tate.2017.05.002.

Hamman, D., Fives, H., & Olivarez, A. (2007). Efficacy and pedagogical interaction in cooperating and student teacher dyads. *Journal of Classroom Interaction, 41/42*(2/1), 55–63.

Jörg, T. (2004). A theory of reciprocal learning in dyads. *Cognitive Systems, 6*(2/3), 159–170.

Koerner, M., Rust, F. O., & Baumgartner, F. (2002). Exploring roles in student teaching placements. *Teacher Education Quarterly, 29*(2), 35–58.

Lee, J., Tice, K., Collins, D., Brown, A., Smith, C., & Fox, J. (2012). Assessing student teaching experiences: Teacher candidates' perceptions of preparedness. *Educational Research Quarterly, 36*(2), 3–20.

Lyle, S. (2008). Dialogic teaching: Discussing theoretical contexts and reviewing evidence from classroom practice. *Language and Education, 22*(3), 222–240.

Montgomery, M. S., & Akerson, A. (2019). Facilitating collaboration through a co-teaching field experience. *Networks: An Online Journal for Teacher Research, 21*(1), 2. https://doi.org/10.4148/2470-6353.1284

Murphy, C., & Carlisle, K. (2008). Situating relational ontology and transformative activist stance within the 'everyday'practice of coteaching and cogenerative dialogue. *Cultural Studies of Science Education, 3*(2), 493–506. https://doi.org/10.1007/s11422-008-9124-y

NCATE. (2010). *Transforming teacher education through clinical practice: A national strategy to prepare effective teachers. Report of the blue ribbon panel on clinical preparation and partnerships for improved student learning*. Washington D.C.: National Council for The Accreditation of Teacher Education.

Newell, S. T. (1996). Practical inquiry: Collaboration and reflection in teacher education reform. *Teaching and Teacher Education, 12*(6), 567–576. https://doi.org/10.1016/S0742-051X(96)00001-7

Ronfeldt, M., & Reininger, M. (2012). More or better student teaching? *Teaching and Teacher Education, 28*(8), 1091–1106.

Rozelle, J. J., & Wilson, S. M. (2012). Opening the black box of field experiences: How cooperating teachers' beliefs and practices shape student teachers' beliefs and practices. *Teaching and Teacher Education, 28*(8), 1196–1205.

Scantlebury, K., Gallo-Fox, J., & Wassell, B. (2008). Coteaching as a model for pre-service secondary science teacher education. *Teaching and Teacher Education, 24*(4), 967–981. https://doi.org/10.1016/j.tate.2007.10.008

Schutz, W. C. (1958). *Firo: A three-dimensional theory of interpersonal behavior*. Rinehart.

Soslau, E., Gallo-Fox, J., & Scantlebury, K. (2018). The promises and realities of implementing a coteaching model of student teaching. *Journal of Teacher Education, 70*(3), 1–15. https://doi.org/10.1177/0022487117750126

Tobin, K. G. (2006a). *Teaching to learn: A view from the field, 4*. Sense Publishers.

Tobin, K. (2006b). Learning to teach through coteaching and cogenerative dialogue. *Teaching Education, 17*(2), 133–142. https://doi.org/10.1080/10476210600680358

Tomlinson, P. D., Hobson, A. J., & Malderez, A. (2010). Mentoring in teacher education. In P. L. Peterson, E. Baker, & B. McGaw (Eds.), *International encyclopedia of education* (pp. 749–756). Amsterdam: Elsevier.

Valencia, S. W., Martin, S. D., Place, N. A., & Grossman, P. (2009). Complex interactionsin student teaching: Lost opportunities for learning. *Journal of Teacher Education, 60*(3), 304–322. https://doi.org/10.1177/0022487109336500

Zwart, R. C., Wubbels, T., Bolhuis, S., & Bergen, T. C. (2008). Teacher learning through reciprocal peer coaching: An analysis of activity sequences. *Teaching and Teacher Education, 24*(4), 982–1002.