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CULTIVATING VYGOTSKY'S *BUDS OF DEVELOPMENT* IN THE EDUCATION OF A BRAZILIAN PUBLIC SCHOOL ENGLISH TEACHER

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Abstract

Grounded in a Vygotskian sociocultural perspective, this paper investigates how a teacher educator intentionally mediated an English teacher's engagement with ideal forms and how this mediation nurtured her *bud of development* as she refracted the mediation offered. Data were generated across eight cycles of narrative writing, video-recorded lessons, and synchronous teacher educator-teacher interactions. Findings show how responsive mediation led the teacher to revisit her everyday knowledge, mainly through the scientific concept *input,* and to develop a more robust understanding of the input-output relationship for English language teaching and learning. Situated within the Brazilian context, where the theory-practice divide prevails, this study draws on VSCT to reconceptualize this gap as a potential site for the professional development of future English language teachers, thereby fostering *praxis*.

Keywords: Vygotskian Sociocultural Theory; L2 Teacher Education; Responsive Mediation; Ideal Forms; *Buds of Development*.

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1. Introduction

In the Brazilian educational context, second language[1] teacher education (LTE) has traditionally been characterized by a fragmentation between theoretical coursework and practical teaching experience. In most undergraduate programs, opportunities for sustained and mediated engagement with teaching practice are limited, typically occurring within the practicum, which is often regarded as the central site for learning to teach and usually takes place only in the final year of the program. Although governmental initiatives have sought to introduce students to teaching earlier in their programs, these experiences do not always provide structured opportunities for the deliberate integration of theory and practice.

Adding to this scenario, Agnoletto (2024) points out that many English language undergraduate students take on teaching responsibilities – often without systematic pedagogical support – before completing their degrees due to a shortage of qualified professionals in Brazil. As a result, the theory-practice divide may contribute to challenges in teachers' professional practice that emerge early in teacher education programs and persist throughout and beyond graduation, underscoring the need for ongoing, theoretically grounded, structured, and situated professional development.

In contrast to these shortcomings, Freirean perspectives (Freire, 2005) have significantly influenced Brazilian LTE by emphasizing the need for practices that integrate deliberate reflection and socially responsible action (i.e., *praxis*). This entails teachers' critical engagement with their contexts, promoting pedagogical transformations as they develop professionally. In alignment with this view, the *Brazilian National Common Core Curriculum*[2] (BNCC, Brazil, 2018) highlights the importance of sustained continuing teacher education aimed at developing teacher expertise. To move beyond a technical or fragmented orientation, however, LTE can benefit from theoretically informed, systematic, and structured mediational practices that support teachers' ongoing development in contextually responsive ways.

As a *theory of mind* that posits the social origins and inherently mediated nature of human mental functioning, Vygotskian Sociocultural Theory (VSCT; Vygotsky, 1978, 1987, 1998) directly address this by explaining that human consciousness develops through the interaction between individuals, or social relations, cultural artifacts and activities, and scientific and everyday concepts. From this view, language, as the most pervasive mediational means (Lantolf & Thorne, 2006), enables individuals to make sense of their everyday experiences and move beyond them, creating possibilities for transcending immediate contexts and engaging in higher forms of cognitive activity, such as abstract thinking, prediction, and attention, etc. Critical to the development of higher forms of mental functioning is formal instruction, or schooling, as it provides learners with opportunities to revisit their everyday knowledge of the world and reconceptualize it, a movement that highlights Vygotsky's view of the dialectical

unity of theory and practice, or *praxis*. Additionally, VSCT argues that formal instruction is not a process of enculturation into existing social practices, but a transformative process of "artificially" (i.e., deliberately set in motion by human action) restructuring human cognition in ways that enable us to appropriate and reconstruct available resources while simultaneously refashioning those resources to meet local needs and goals.

In the context of L2 teacher education, Johnson and colleagues (Agnoletto et al., 2022; Johnson, 2009; Johnson & Golombek, 2016; Johnson et al., 2023; Johnson et al., 2025; Johnson et al., 2026) have repeatedly demonstrated how a VSCT perspective promotes the integration of theory and practice. These studies are rooted in the premise that scientific concepts (i.e., those developed through formal instruction) and everyday concepts (i.e., those arising from everyday activity) must meet and merge, consequently enabling teachers to not only think and teach more thoughtfully and deliberately, but more importantly, transform their understandings of themselves as teachers, their students' learning, and the activities of language teaching. Fueling this convergence lies at the heart of this theoretical perspective, especially when teacher educators (TEs) intentionally mediate teachers through *ideal forms* (Vygotsky, 1994) – i.e., robust, stable, culturally established, and well-founded forms of scientific knowledge.

In this vein, we advocate that L2 teacher education initiatives should be structured to foster ongoing changes in the *social situation of development* (SSD; Vygotsky, 1994) through the intentional introduction of scientific concepts, or ideal forms. The SSD can be understood as the dialectical and dynamic unity of the social environment and the individual. To support its co-construction, teachers need opportunities to have their reasoning inquired into by TEs, who, in turn, provide responsive mediation (Johnson & Golombek, 2016) tailored to teachers' needs and responses to inquiry. Such mediation can foster qualitative changes in teacher cognition and practical activity, depending on how teachers refract it – that is, how they cognitively and emotionally experience the mediation they receive. Provoking these changes entails capitalizing on "functions [that] are not fruits yet, but buds or flowers of development" (Vygotsky, 2011, p. 204). Drawing on Vygotsky's agricultural metaphor, we contend that TEs' mediation should intentionally target teachers' *buds of development* – that is, mental functions at an embryonic stage of the developmental cycle that emerge on the interpsychological plane (i.e., through interaction with others) – in ways that push teachers ahead of themselves and provoke transformations on the intrapsychological plane (i.e., individual, internal mental functioning). Consequently, teachers may come to develop forms of thinking and acting that are not part of their independent functioning, thus becoming who they are not yet.

By upholding that the deliberate creation of structured mediational spaces can help both promote and trace teacher professional development, this paper investigates how a TE builds on a Brazilian public school English teacher's *bud of development* during a series of cyclical professional development activities. To do so, we examine how the TE intentionally mediated the teacher's engagement with

ideal forms of language teaching (input-output) and how this mediation nurtured her *bud of development* as she refracted the mediation offered, and reoriented her reasoning and pedagogical activities.

2. A Vygotskian-informed approach to L2 teacher development and its potential in the Brazilian context

As Dellagnelo and Silva (2024) argue, LTE has historically been shaped by the positivist paradigm, which promotes a dichotomous relationship between theory and practice. The authors further emphasize that this paradigm construes teachers' practical activity as the mere acquisition of techniques assumed to be indiscriminately applicable across contexts, thereby reinforcing a view of knowledge as static and independent of contextual factors. Such a stance neglects the sociocultural nature of learning to teach, reducing it to a fragmented process that can supposedly be replicated through ready-made "recipes." As a result, it remains common to encounter LTE undergraduate programs and so-called "continuing teacher education courses" that fail to integrate theory and practice.

In contrast, Vygotskian-informed LTE initiatives emphasize the importance of teachers externalizing the reasoning underlying their pedagogical choices, situating these choices within specific contexts, and revisiting them through theoretical knowledge capable of transforming both teacher cognition and pedagogical activity. Given Vygotsky's (1978, 1987, 1998) focus on the social origins of human cognition, responsive mediation (Johnson & Golombek, 2016) illuminates the need to remain attuned to teachers' ongoing development, exemplifying what dialectics looks like within VSCT – responsive mediation involves not only "teacher educators responding to novice teachers' needs but also novice teachers responding to teacher educators' mediation" (Johnson et al., 2023, p. 20). Additionally, being responsive implies capitalizing on what teachers bring to the table so that ideal forms are meaningfully contrasted with their current developmental starting points (i.e., real forms). In doing so, TEs strategically build on teachers' existing knowledge and *perezhivanie* – the prism through which individuals both interpret and feel events on the interpsychological plane (Vygotsky, 1998) – to set the stage for professional growth. Importantly, the same pedagogical event does not have the same developmental significance for every teacher. *Perezhivanie* is not the event itself, but how the individual teacher experiences (or refracts) it, which depends largely on his/her sociocultural history and perceptions of the social relations at a given point in time.

In this regard, Johnson et al. (2023) argue that language TEs can intentionally shape the SSD. This does not mean that the quality or nature of the mediation is predicted beforehand – intentionality lies in strategically structuring mediational spaces that allow teachers to actively shape the SSD as their *perezhivaniya*[3] refract what they encounter, while also enabling TEs to build on teachers' refraction and

deliberately readjust the SSD through ideal forms (scientific concepts). In this dynamic, the TE and the teacher co-construct the conditions for development, as the former mediates the latter toward more robust ways of thinking about and enacting teaching, while the latter brings their knowledge and experiences into the interaction and engages with the mediation through their own *perezhivaniya*.

During this co-construction, teachers often experience moments of cognitive/emotional dissonance (Johnson & Worden, 2014; Johnson & Golombek, 2016) – i.e., moments of instability between cognition and emotion that emerge when teachers realize their practical activity does not coincide with what they envision. These moments can serve as catalysts for professional development, especially when TEs offer mediation that is responsive to them. Besides having teachers become aware of the origins of the dissonance or drama (Veresov, 2017) they face, it is imperative that TEs mediate teachers toward overcoming moments of dissonance, which can potentially foster the restructuring of their reasoning (cognition) and their pedagogical choices (activity).

This movement is critical, especially when bringing into the discussion the *zone of proximal development* (ZPD) activity (Holzman, 2018) – that is, the arena of potentiality during which cognition originates in the social, collective mind (Johnson et al., 2025). As Agnoletto et al. (2022) contend, "the ZPDs of teachers also shape how they understand mediation in qualitatively different ways as a result of differing *perezhivaniya*" (p. 170), which entails acknowledging the intrinsic relationship between *perezhivanie* and ZPD activity. The authors note that

> […] once the ZPDs are brought into the picture, responsive mediation must recognize one's *perezhivanie* and be responsive to immediate need, a scenario that foregrounds the importance of teacher educators to be cognizant of teachers' *perezhivaniya* as they help them work through and learn from their mediational activities. (Agnoletto et al., 2022, p. 170).

This becomes particularly interesting when considering that it is during ZPD activity that TEs can identify *buds of development*, offer mediation targeted at those buds so they can blossom into *flowers* (i.e., developing functions that are taking shape but are not yet fully internalized) and eventually into *fruits* (i.e., intrapsychological, fully developed individual functions). During ZPD activity, intentionally employing ideal forms may allow TEs to build on teachers' potentialities and push them toward more complex, thorough, theoretically-informed conceptions (i.e., flowers into fruits) of teaching and learning. It is also important that the ideal forms guiding teacher development remain consistently foregrounded during professional development initiatives, ensuring that both TEs and teachers maintain a clear orientation toward the purposes of their engagement.

In short, responsive mediation offered by TEs during professional development ZPD activities has the potential to foster the internalization of scientifically grounded, or ideal forms of conceptualizing language teaching.

The movement between responsive mediation and teachers' refraction of it can equip teachers with psychological tools to enact their professional activity in pedagogically sound ways, thus giving concrete expression to Vygotsky's (1987) claim that the dialectical relationship between teaching and learning paves the way for the development of one's professional consciousness.

3. Method

3.1 Tracing and provoking development: the TE's intentionality

Drawing on Vygotsky's call for a method that is, at the same time, tool and result (Newman & Holzman, 1993), the study was intentionally designed by the TE[4] to both provoke and trace teacher professional development while addressing the theory-practice divide commonly institutionalized in Brazilian LTE programs. Eight cycles of dialogical activities comprised the data for the study. Each cycle unfolded through three interrelated activities. First, the teacher was asked to produce a brief written narrative reflecting on a particular challenge in her practice (e.g., the teaching of speaking). Next, she video-recorded a classroom segment in which she grappled with that challenge and uploaded the recording to an online platform. Finally, the TE and the teacher met online for a synchronous discussion of both the narrative and the video, a stage referred to as T/TEd-I (Teacher/Teacher Educator interaction). The sequence followed a two-week rhythm: in the first week, the teacher engaged in narrative writing and video recording, while the following week was dedicated to the T/TEd-I session, which also marked the end of that cycle.

The sequence of activities was intentionally structured by the TE as a set of mediational spaces aimed at transforming the teacher's thinking and practical activity. Specifically, the sequence provided the TE with opportunities to: learn about the teacher's thinking by having her externalize her reasoning through narrative writing and during T/TEd-I sessions, including her past *perezhivaniya* of teaching and the ways in which her *perezhivanie* refracted the mediation she received throughout the study; build on her emerging needs and maintain a high level of attunement, thereby maximizing opportunities for responsive mediation aimed at transforming her thinking and practice; and trace changes in her externalized thinking and practical activity throughout the study in relation to the mediation she received.

Organizing these activities into recurring cycles was therefore central to the study's methodological design, which entailed a microgenetic approach, focusing on the development of specific mental processes over a relatively short period of time (Wertsch, 1985). Rather than treating mediation as a discrete intervention, the cyclical structure provided sustained opportunities for the

teacher to: externalize her reasoning as it developed; revisit and make sense of her thinking and practical activity through responsive mediation offered by the TE; and repeatedly engage with the ideal forms (i.e., input-output, in relation to the teaching of speaking) deliberately brought into the interaction by the TE, creating opportunities for further reasoning about and transformation of her professional consciousness.

It is also worth noting that the TE had the teacher identify an aspect of her teaching practice that she herself felt warranted closer attention. This was intentionally aimed at creating space for her to articulate and explore her own professional concerns while also ensuring a safe environment, as she only shared aspects of her teaching that she felt comfortable making visible. Moreover, this sought to provide an early indication of her *buds of development*, enabling the TE to deliberately select ideal forms to be introduced. In brief, the TE's choices shaped the mediational space in intentional, meaningful, and responsive ways by building on the teachers' contributions from the very beginning.

Another important point is that the T/TEd-Is were purposefully transcribed at the end of each cycle to maximize the TE's opportunities to provoke and trace change as it unfolded over time, thus aligning with the microgenetic nature of the study. In addition to helping him keep track of the teachers' developmental processes, the constant revisiting of these interactions – while data were being collected – informed the TE's subsequent intervention. This also helped the TE maintain a clear focus on his main goal with the teacher (i.e., mediate her toward fostering high quality speaking practices in the language classroom) while sustaining high levels of attunement afforded by the design.

3.2 Participants

Although four teachers participated in the original study[5], this paper reports on data from only one of them due to the in-depth nature of the analysis. Because of the lack of Vygotskian studies in public school teacher education in Brazil, the participant chosen was a 35-year-old teacher who teaches in a public school in the state of Santa Catarina, Brazil. The participant-teacher, Amelia[6], was a master's student in a language graduate program in southern Brazil. Her academic path was non-linear: she began an undergraduate degree in English and Portuguese in 2013, interrupted her studies, and later completed a distance-learning program at a private university in 2021, obtaining her teaching license. Amelia started teaching English in a public school in 2013, before graduating. At the beginning of the data collection, she had about two years of experience as a licensed teacher and was teaching a group of high school students.

The TE was 28 years old during the data collection phase and had ten years of experience teaching English. His professional trajectory included work in three language teaching programs at a federal university in southern Brazil. He had also worked for four years as a pedagogical coordinator in one of those programs,

being responsible for observing classes taught by novice teachers, discussing their pedagogical practices, and providing pedagogical support. During the COVID-19 pandemic, he also contributed to the implementation of the program's online courses through material planning and pedagogical supervision. In addition to his practical experience, he had seven years of experience researching teacher education from a Vygotskian perspective and was in the final year of his doctoral studies.

4. Data analysis

4.1 Data analysis procedures

Consistent with a microgenetic approach, the data analysis focused on the emergence of *buds of development*, as well as on the interactions between the TE and the teacher that led these buds to blossom, aligning with Vygotsky's (1978) call to study phenomena historically – that is, in the process of change. For the purposes of the present discussion, the excerpts selected were those that most clearly illustrate the following: (a) the emergence of a *bud of development* (Amelia's conceptualization of *input*); (b) the reasoning behind the TE's responsive mediation, particularly through the use of ideal forms (i.e., mainly the scientific concept *input*); (c) the teacher's refraction of the TE's mediation, which at times resulted in moments of cognitive/emotional dissonance; (d) how the TE capitalized on these moments by (re)orienting the teacher through ideal forms; and (e) the changes in the teacher's thinking and practice that reverberate the TE's responsive mediation.

4.2 Getting a sense of Amelia's past perezhivaniya of teaching: "meaningful activities… not just grammar"

As described earlier, at the outset of the study, Amelia chose the teaching of speaking as a topic she considered challenging to teach. The excerpt below illustrates her explanation for this choice.

> I chose SPEAKING SKILL to start this teaching pedagogical program […] sometimes, to include the output competences in the English classes is very challenging. […] As a student, I remember some meaningful activities when I was supposed to speak and express myself in English, talking about some personal topics, like who I was and what I liked to do. […] I try to […] promote classes where they could express their opinions

> and talk about their preferences, about things they like or do not like to do and not only discuss language learning, not just grammar. In this particular group […] they are a 3rd year of high school. I couldn't improve speaking in the classes, because there are many gaps in their knowledge. They had just a little bit of learning about English at public school.
>
> (Excerpt 1, Narrative 1)

Amelia's orientation toward speaking in the classroom highlights how she refracted her own experience as a student. For her, the meaningful activities were those in which she was supposed to express herself, thus pointing to how she lived through her apprenticeship of observation (Lortie, 1975) – i.e., her own instructional history as an English language learner. Her *perezhivaniya* as an English language learner thus oriented her toward planning lessons that allow students to talk about topics they perceive as relevant.

Amelia contrasts "meaningful activities" to "language learning" *per se* – that is, grammar. This shows how she refracts English teaching – for her, meaningful speaking activities contrast with grammar instruction, which she perceives as insufficient for promoting speaking. However, when referring to the particular group of high school students she was teaching, Amelia acknowledged their linguistic limitations by citing "gaps in their knowledge", implying that such gaps help explain the challenges she faced when trying to promote meaningful speaking opportunities in the classroom.

Although Amelia recognized gaps in students' knowledge, she seemed to not know how to cope with them, admitting her lack of success when trying to promote speaking lessons, which signals the need for responsive mediation targeted at helping her overcome the challenge of teaching speaking.

4.3 Spotting a bud of development: The connection between input and output

The first narrative allowed the TE to get a good sense of how Amelia cognitively and emotionally related to teaching speaking, valuing pedagogical practices that center on topics deemed relevant by students. Although this sounds compelling, after observing two of Amelia's classes, the TE realized that the way she planned her lessons did not effectively support students in speaking: she provided very little instruction on aspects such as vocabulary and grammar and did not plan activities that were built on one another to prepare students to speak.

Together with Amelia's view that having students speak was challenging due to gaps in their knowledge (a view that most Brazilian public school English teachers may relate to), the lessons observed allowed the TE to notice a possible area of growth that could enable Amelia to foster greater opportunities for

speaking in the classroom: providing students with linguistic input as a way to have them successfully engage in speaking.

In the second observed lesson, the discussion revolved around curricular mandates, specifically the concepts of recycling, reusing, and reducing. Amelia began the lesson with a song addressing environmental issues, aiming to introduce key vocabulary and promote critical reflection. Students listened to the song and completed a fill-in-the-gap activity, after which the discussion was expanded to include the three Rs (reduce, reuse, recycle). Amelia then clarified additional vocabulary from the song and asked students to work in groups to discuss its main ideas.

For the TE, Amelia's concern with having students speak about topics they related to led her to neglect the "gaps in their knowledge" she had mentioned in Narrative 1. During their second interaction, the TE intentionally had Amelia revisit her second video-recorded class and articulate how she felt about it, with the aim of leading her to realize that her students did not engage in the activity as she had expected:

> **TE: Your main goal was speaking […] I would like to know what your impressions on the class were. Do you like what you did? Would you have done anything differently? How do you feel? Do you feel it worked?**

> A: […] I was trying to make the students speak so I think I was trying to do all activities in that day but I think it was a little rushed, so I don't know if the students were able to speak and think properly to develop better their speaking skill. I think I didn't [sighs]… I tried but I didn't achieve [laughs] my goal.

> (Excerpt 2, T/TED-I 2)

According to her, the song was intended to function as a listening activity that would introduce the topic and motivate students to engage in speaking. However, students showed limited engagement in the main speaking activity, relying predominantly on Portuguese as they discussed the song and its message. During T/TED-I 2, the TE intentionally prompted Amelia to reflect on how the lesson unfolded, directing her attention to her stated objective of promoting student speaking. She realized that the lesson did not go as she thought it would, her *perezhivanie* leading her to experience cognitive/emotional dissonance, expressing frustration and embarrassment, which are signaled by her sigh and laughter as she mentioned she had not achieved her goal.

Despite Amelia's realization, the only reason she gave for not having achieved her main objective was that the class was "a little rushed." Although the pace of the lesson might have contributed to this, the TE invited Amelia to reflect

more deeply on her decision to use the song. By capitalizing on the moment of cognitive/emotional dissonance she experienced, the TE mediated her in noticing the tension between her idealized view of teaching and how the class actually unfolded, with the goal of fostering a more thorough understanding of her teaching:

> **TE: […] Having in mind that they had to discuss about the environment later, I would like to ask you if you think that the song was enough to prepare them for that, or if you think you could have done something differently, maybe, or explored that song a little more.**
>
> A: Well, maybe this song was just an introduction to these concepts. I could maybe explore with other activities or maybe bring, I don't know, some material or video, some texts talking about this to read with them […] Especially because they are in eleventh grade of high school, so maybe to develop their critical views. It'd be necessary more preparation.
>
> **TE: Yeah, yeah, I agree with you. And I think this is a very, very good idea because you talk a lot about the importance of output, right? But to do that, they need a lot of input, right? And this is something very important because we talked about it in our first meeting when you said that there are many things that they need to learn, right? Because we have some problems in school. […] They lack vocabulary, they lack grammar… They lack many things that are important for them to speak.**
>
> A: Yes, right.
>
> TE: When you think about English itself, right, I think that they need more input to do that [to speak].
>
> A: Perfect, Matheus.
>
> **TE: Do you agree with me?**
>
> A: Yes, I agree. That could be a good explanation because they try, they wanna learn, they wanna talk in English, but sometimes they can't because they don't have this, the input, the necessary input, yeah. To develop better the output competence, yeah.
>
> (Excerpt 3, T/TED-I 2)

By being prompted to think about alternatives to what she could have done, Amelia realized that the song was just an introduction to the topic, and that more materials were necessary. Despite this, the somewhat simplistic and general nature of Amelia's response suggested that she required more explicit mediation. Therefore, building on what she said, the TE redirected her attention to what he thought could help her cope with the gaps in students' knowledge: input. During their interaction, the TE explicitly named what he thought Amelia's classes lacked (i.e., grammar and vocabulary), bringing the discussion on linguistic aspects to the surface through an ideal form (i.e., input) that was introduced as an alternative to address the gaps in students' knowledge he had noticed.

Amelia's response shows agreement that lack of input could explain why students did not speak in English. Her explicitly connecting input and output signaled to the TE a *bud of development* that emerged in response to the his mediation, suggesting that a new ZPD activity had been created, allowing Amelia to temporarily act a head taller than herself. Moreover, the movement between the TE's mediation and Amelia's refraction of it shows the dynamics of the environmental structure of development, that is, the SSD – the TE responsively introduced input as an ideal form in the face of a cognitive/emotional dissonance experienced by Amelia, and as she refracted his mediation, ZPD activity was created, making her cognizant of a pedagogical aspect that could possibly help her foster speaking in the classroom. However, it is not clear what Amelia meant by "the necessary input", suggesting the need for further mediation.

As the interaction progressed, the TE capitalized on the idea of providing input as he noticed that her students might have needed more guidance to engage in the main activity. As Amelia explained her decision to include a pre-task, the TE built on her responses to introduce additional ideal forms and prompt her to revisit her reasoning:

> TE: […] why do you like to have them do pre-tasks before the main tasks?
>
> A: Because I think the students need some, I don't know, some previous preparation to understand the main activity, some vocabularies. Because sometimes, when we are trying to do these speaking activities, the students don't know the vocabularies, the necessary vocabularies to talk. I think I have to present to them these vocabularies first, to encourage them to talk, to practice, and after that they could be more prepared and more confident in their speaking.
>
> **TE: Yeah, yeah, I totally agree with you […] In the song there was some vocabulary for them to get acquainted with the three R's, to get acquainted with vocabulary related to recycling, to the environment, right? But besides lexical, besides vocabulary, they also need the structural part that they will have to use […] we have all this input**

> **on many levels. There's lexical input, structural input, contextual input… the communicative context… So, you had the communicative context, you had lexical input, you had the words there, right? But to me it lacked the structural part. Like… how they were going to talk about it […] as you yourself said in our first meeting, they lack a lot of knowledge about English, right? […] There's something I tell teachers when they teach the beginner levels when students lack a lot of linguistic knowledge, we have to guide them way more than we have to guide more advanced students.**
>
> (Excerpt 4, T/TED-I 2)

With the goal of having Amelia understand what he thought the lesson needed, the TE introduced the scientific concepts of lexical, contextual, and structural input to highlight that different types of input can be made available to learners. Attention was given to structural input, as this was the aspect most noticeably absent during the observed lesson: at no point did Amelia guide students on how they could discuss the environmental issues presented in the song. By deliberately introducing these types of input (ideal forms), the TE aimed to mediate Amelia toward providing students with input that was appropriate to the demands of the task at hand. This shows his attunement to the *bud of development* that had emerged, as his explanation highlighted the connection between preparing students through input to engage in speaking (i.e., output).

4.4 The reverberating potential of the ideal form: Input as a potential tool for thinking

Amelia started the third class with a vocabulary activity focused on identifying cognates and false cognates by having students match words to their definitions. With the aim of having externalize the reasoning behind her pedagogical moves, the TE inquired into her goals:

> **TE: So, when you were explaining the goals of your activity, you said "to promote more input to my students and guide them more in English learning?". When you say input, you mean input in terms of what? And why?**
>
> A: The input… it was proposed because we discussed about it. To promote output competences, maybe I need to put more input in the classes. So, I realized that it was very important for them because during the activity they were really engaged. I could feel it. I could feel the students very

> involved in the activity, so it was to promote output competences after that activity of input.
>
> (Excerpt 5, T/TED-I 3)

According to her, the activity was thought of to "put more input" in her classes, aiming to prepare students to read a text and then discuss some comprehension questions. Her refraction of the students' participation in class led her to notice how providing them with input may result in engagement, an aspect that she consistently seemed to consider relevant in her teaching activity. Despite this, it remained unclear whether Amelia had understood the relationship between input and output that the TE had previously encouraged her to consider. Her statement that she intended to provide students with input so that it could "promote output competences" appears somewhat oversimplified and incoherent, especially since, for the lesson in question, students were not required to produce either spoken or written language.

During the same T/TED-I, the TE further inquired into the reasoning behind Amelia's choices, leading her to acknowledge the role of input in organizing the way she thought about her class:

> **TE: […] And then something else you said is that you feel more comfortable having these input strategies in class. What do you mean by that?**
>
> A: Because it's not only the students who were guided, I was too. I was very prepared. Normally I try to prepare my activities before the classes and organize my pedagogical strategies. With those resources, with the glossary game and with the words written in English and the description […] to give more input, to guide them better, and after that they could read the text and answer the questions. So, I think it was a very nice and very good experience.
>
> (Excerpt 6, T/TED-I 3)

Excerpt 6 shows that not only did the ideal form guide her thinking, but it also helped her feel more confident while enacting her teaching. The fact that she explicitly stated that she was guided by the concept of input demonstrates her awareness of this instructional choice. Such awareness is paramount in the development of teaching expertise (Johnson & Golombek, 2016; Johnson et al., 2025), particularly when considering the Vygotskian notion that awareness is

necessary for establishing the intellectual connections and relations that propel cognitive development (Vygotsky, 1998).

Nonetheless, although the concept of input seems to have influenced the way Amelia planned the lesson, her understanding of the input-output relationship remained embryonic. Rather than functioning as a fully formed concept – that is, as a tool for thinking – her reference to input, together with the way she structured the activity, with no apparent connection to speaking, points to an initial stage in a possible transformation of her thinking activity. In the words of Dellagnelo et al. (2022), the concept's reverberation in Amelia's speech and practice reveals its "echolike force", providing a window into the process of internalization. In this sense, such reverberation shows how her *perezhivanie* refracted the TE's mediation, evidencing an orientation toward changing her classroom practice through the ideal forms (input-output) introduced to her.

4.5 Nurturing the bud of development: Being responsive to Amelia's responses

The class video-recorded for Cycle 4 was centered on the topic "vacation". Amelia introduced the topic by asking students about their vacation, elicited some oral responses (which students provided in Portuguese), used these responses to review the simple past tense by writing them on the board in English, and then assigned a short-written text about their vacation as homework.

When asked about the goal of her class, Amelia answered that she asked students about their vacations "to maybe give students more input and guide them better, writing, in the first moment, sentences on the board and talking about their vacation using the simple past […] after that they did a main task but for homework". The TE noticed the discrepancy between how Amelia provided students with input and the "main task" she had in mind (i.e., to have them write a paragraph about their vacation). This informed his mediation as he probed some questions to intentionally lead Amelia to the realization that the way she had provided students with input was not appropriate to what she asked of them:

> **TE: […] another thing that you wrote was that you felt students were engaged, talking about their vacations and constructing together the sentences that you were writing on the board. Then you said "These sentences should guide them to do the homework as a writing assignment about their vacations." Do you think that only these sentences would be enough?**
>
> A: Well, we couldn't discuss all things in this class because sometimes we don't have enough time. So, we tried to talk a little bit about the vacation

> of each student. So, I couldn't produce with them more sentences. But I tried to produce something that could guide them, but I know that it wasn't enough. I could see this in the texts they wrote […] I can feel that they need my help but sometimes I don't know how [laughs]… to better help them.
>
> (Excerpt 7, T/TED-I 4)

The TE mediated Amelia toward revisiting her understanding of the relationship between input and output, as he had perceived that this link was not yet clear to her. His mediation deliberately focused on showing Amelia that it is not just a matter of providing students with input but providing them with input that is appropriate to what she is asking of them. Amelia's recognition that her objective had not been achieved emerged as the TE prompted her to revisit her lesson. This pointed to the need for explicit mediation, as cognitive and emotional dissonance became evident in her apparent frustration when recognizing that, despite her efforts, she could not support her students in engaging with the main activity. With the intentional goal of responding to Amelia's moment of dissonance, thus nurturing the *bud of developmen*t (i.e., the connection between input and output), the TE prompted her to notice the inconsistency between the way she had prepared students for the main task and what the task itself required:

> **TE: […] you had a warm up and you wrote some sentences on the board. Do you see any differences between writing these sentences on the board and writing a paragraph?**
>
> A: Yes, because when we are talking about texts, it's not only sentences, few sentences, but a paragraph could be more strategic to help them in this particular task.
>
> TE: Because it's more demanding and complex, right? […] what I missed was a model, an example of what they had to do at the end, right? I mean, for example… You have to write a paragraph about vacation, so why not starting the class with an example, right? […] remember that, the meeting before last meeting, we talked about this idea of input on different levels? On the lexical level, on the grammar level, and on the contextual level, right?
>
> A: Right.
>
> TE: So, the context was vacation time […] "Let's get in small groups and take a look at these paragraphs. And I want you to circle what they did

> during vacation time, right?". And then students would have to find the actions, what happened, what each person did during vacation time. You would be providing them with context and with examples of what they would have to do at the end, in the final task. […] At the end, when you were explaining the final task, you would say "you saw three examples. What I want you to do is something similar to that but related to your vacation time or a trip you took in the past". In the paragraphs they would have contextual input, lexical input, and grammatical input, you know?
>
> (Excerpt 8, T/TED-I 4)

The probing question "Do you see any differences between writing these sentences on the board and writing a paragraph?" gave rise to ZPD activity, as evidenced by Amelia's realization that "a paragraph [in the warm-up/pre-task] could be more strategic to help them in this particular task." Building on this realization, the TE drew attention to the level of complexity involved in writing a paragraph and acknowledged her intention to review the simple past tense, thereby alluding to the concept of structural input. In doing so, he presented an alternative to her approach by suggesting the use of paragraphs to provide students with input on different levels, which would be more appropriate given her goal of having them write a paragraph. These intentional choices were aimed at helping Amelia understand that the input provided must be related to what is expected of students when producing output.

4.6 From bud to bloom: The initial emergence of a flower

Cycle 7[7] shows a shift in how Amelia externalized her reasoning as she defined the specific kind of input that she provided students with and explained why. In the 7th video-recorded lesson, she introduced the target structure "be going to" through a meaningful and relatable context, sharing her own plans for the coming year and thereby situating the language within a real-life scenario (New Year's planning). She then invited students to share their own plans, using their contributions as further contextualized input while explicitly drawing attention to the form and use of "be going to." The subsequent pair work ("What are your plans for the future?") created opportunities for students to engage with the structure in a communicative and personalized way, reinforcing its meaning and function. As a final step, by asking students to report a classmate's plans, Amelia extended the activity into a more cognitively demanding task, requiring learners to engage in a speaking activity while also attending to both meaning and form.

It is important to note that the TE and Amelia had engaged in prior discussions about Task-Based Language Teaching (TBLT). Although this was not the central

focus of their interactions, Amelia's interest in TBLT – which arose in response to a course she was taking in her graduate program – was strategically leveraged by the TE to support more coherent and logically sequenced lesson planning[8]. While Cycle 7 reflects Amelia's initial attempts to enact some TBLT principles, what stands out more prominently is her explicit articulation of the relationship between input and output. When asked about the main communicative goal of her lesson, she stated:

> A: Well, the main communicative goal was students talk about something related to their lives, their experience, something that students could understand, like, "how to say something that I'm going to do in the next months?". So, I organized the class to propose to students plans for the future, and […] I was trying to give the students this input, this structural input to understand how I can say something in the future in English […]
>
> (Excerpt 9, T/TED-I 7)

Amelia not only acknowledged the role of input in her lesson and connected it to students' ability to "say something in the future," but also specified the type of input required – structural input. This marks a significant shift in comparison to Cycle 1, when she avoided addressing grammatical aspects due to her stated view that meaningful speaking activities contrast with grammar instruction. Her understanding of the input-output relationship thus became more elaborate, as she recognized that grammar instruction was necessary for her learners to express future intentions. Moreover, Amelia came to an important realization, as illustrated below:

> […] the students need input to understand how language is organized, not only to speak but the writing, and how language is used. Besides that, the students maybe feel more comfortable to try to use, to try to produce output. I really have this in my mind now. I know that sometimes I gave the students input but I didn't give the right input […]
>
> (Excerpt 10, T/TEd-I 7)

Excerpt 10 indicates that the TE's intentional, sustained, and responsive mediation prompted Amelia to revisit and reorganize her thinking and practice. Initially, Amelia did not recognize the need for input to support output. In subsequent cycles, she began to orient to the concept of input, though still without ensuring its alignment with task demands. In Cycle 7, however, she not

only identified the type of input required but also articulated the importance of its appropriateness, explicitly acknowledging the need to provide the "right" input. This is not to suggest, however, that a fully formed fruit had developed, as this would imply that Amelia had consistently and deliberately oriented her teaching in accordance with input, while also being able to articulate the reasons underlying her pedagogical choices – what would constitute Vygotsky's notion of internalization. Rather, this progression suggests that what once was a bud started to become a flower – i.e., there has been a transformation in Amelia's conceptual development, as her understanding of input appropriateness began to inform both her planning and teaching activities.

Additionally, Amelia's perception that input enhances learners' confidence appears to have shaped her increasingly positive appraisal of the input-output relationship. Her *perezhivanie* of the changes in her classroom reflects the transformative potential of sustained, goal-directed mediation. Evidence of this can be seen in the lesson itself: students were able to express their future plans in English – albeit with minor inaccuracies and limited vocabulary – which was directly linked to the structural input provided through Amelia's modeling and explanation.

In Cycle 8, Amelia began the lesson by reviewing what the students had studied in the previous class (plans for the future). She handed out signs containing sentences in the future tense and asked students to read them and identify whether they were affirmative, interrogative, or negative. The sentences were based on the discussions from the previous class, allowing Amelia to draw on the students' own contexts. As a whole-class activity, students were asked to read each sentence and then identify which category it belonged to. Amelia then wrote their answers on the board, organizing the sentences into three columns according to whether they were affirmative, interrogative, or negative. She also revisited the previous lesson's explanations of how to talk about the future using *be going to*. Following this review, students were instructed to write one question about a classmate's future. They then worked in pairs, taking turns asking and answering each other's questions, while Amelia walked around the classroom to assist them.

The main activity students engaged in during that class responded to the curricular demand of preparing them for the university entrance examination they were expected to take later that year. After the pair work, she handed out an activity containing a summary of what they had studied about expressing the future and asked students to answer multiple-choice questions focusing on grammatical form. Although she engaged in form-focused activities that mirrored the type of questions students would encounter in the examination at the end of the year, Amelia was also concerned with teaching grammar from a more communicative stance, intentionally fostering a connection between input and output, as illustrated in the excerpt below:

TE: […] you mentioned this idea of guiding students to do things step by step [in the narrative]. I can see that this is pretty much present in your teaching activity now, right?

A: Right.

TE: Can I say that this has become an important goal to you?

A: Yes, to give students the correct input. For me, now, it is very clear. I can see how important it is to guide students to be prepared. Before the task, giving input… and I think it's a very important part of the class.

TE: And how different is this from what you were doing at the beginning of our meetings?

A: I think at the beginning I was not so conscious about the input. I was not conscious about the importance of the input and the importance of input to produce output. So, for my students to talk in English and write in English, they need the correct input to develop the output. And I was not so conscious about this process.

(Excerpt 11, T/TEd-I 8)

When inquired into her step-by-step approach to planning the class, Amelia immediately resorted to input to explain her reasoning, describing it as a way of preparing students for the activities that followed. The TE then explicitly invited her to reflect on how this way of thinking differed from her planning at the beginning of their meetings. Amelia's response foregrounds a change in her thinking: whereas she had initially not been conscious of the importance of input or of its relationship to output, she now described this connection as an important part of how she thought about her lessons. In this sense, her account suggests that the interactions with the TE had contributed to her developing a more conscious understanding of how input could prepare students for producing language. In other words, the TE's intentional mediational moves nurtured the *bud of development* that had emerged during the initial cycles, supporting Amelia in developing a new understanding of what she was doing.

What is particularly interesting about this lesson is that this emerging understanding can also be seen in the way Amelia organized the activities. She first provided students with structural input and then had them engage in brief oral interaction in pairs before moving on to the form-focused activity. Although the lesson had a clear form-focused goal, Amelia organized the activities in a

sequence that suggests she was now planning in terms of connecting input and output. An additional gain was that this way of conceiving the lesson allowed her to break the planning down into interconnected steps, which, in turn, seems to have helped her develop a more holistic view of the lesson as a process in which each activity prepared students for the next.

4.7 Picking up a flower of development: A more refined understanding of the input-output relationship

Although a few more cycles might have been necessary for the TE to further mediate this emerging development and, in time, support Amelia in "picking the fruit" of her developmental process, her change also becomes evident in her final narrative:

> Now, it is totally clear to me that, to produce output, I have to provide input first in an effective way. I cannot consider that only presenting some new information in one way could be correct input, because the students (especially in public schools, where there are many gaps) need to receive input in different levels, in a lexical, grammatical and contextual level. […] I can say that the way that I organize my classes is something that has changed after the teacher education initiative, because now I can think about my classes in a whole picture.
>
> (Excerpt 12, Final Narrative)

In Excerpt 12, input appears as a more generalizable principle guiding Amelia's thinking. Her statement that it is now "totally clear" that output depends on effective input indicates that the concept has become a tool through which she organizes her pedagogical thinking. Unlike in earlier moments, her understanding now extends beyond specific activities and seems to inform her lesson planning as a whole. Moreover, by recognizing that simply presenting information does not constitute adequate input and by emphasizing the need to provide it at different levels – lexical, grammatical, and contextual – Amelia demonstrates a more refined and integrated understanding of the concept. This suggests that scientific and everyday concepts have become more closely aligned, allowing her to reconceptualize her teaching practice. In this sense, what had initially emerged as a bud has developed into a flower: a more visible and integrated form of understanding that, while not yet necessarily stabilized as an intrapsychological form of knowledge, shows potential to further become the "fruit" of Amelia's developmental process.

5. Final words

The cyclical dialogic activities developed in this study created sustained and structured mediational spaces through which the TE could intentionally identify, cultivate and trace Amelia's *bud of development* through ideal forms. Within this process, the relation between input and output emerged as a developmental bud that was responsively nurtured by the TE. What initially appeared as a vague and underdeveloped notion gradually evolved into a more elaborate and theoretically grounded understanding, shaping both Amelia's reasoning and, to some extent, her classroom practice. This development points to the central role of intentionality in teacher education: it was not only the TE's mediational moves, but also the deliberate design of the cyclical dialogic activities, that created the conditions for this development to unfold. In this sense, the study lends empirical support to the idea that LTE practices can be deliberately organized around identifying and cultivating *buds of development*. It also offers a more nuanced understanding of what "artificial" means from a Vygotskian perspective: development is artificial not because it is imposed or manufactured, but because it is intentionally set in motion through human activity.

More broadly, the study illustrates how a Vygotskian sociocultural theoretical perspective for LTE can offer an alternative to the theory-practice divide that continues to dominate language teacher education in Brazil. Rather than treating theory and practice as separate domains, this perspective positions their integration as something that can be developed through sustained, responsive mediation. This entails creating opportunities for teachers to externalize the reasoning underlying their pedagogical choices, examine these choices in relation to their particular contexts, and revisit them through ideal forms (i.e., scientific concepts). In this process, theoretical knowledge does not function as a set of prescriptions to be transferred into practice; rather, it becomes a means through which teachers can reinterpret their professional activity and develop more sound-instructional ways of thinking about and enacting their teaching.

This has important implications for the work of TEs. Their role involves more than introducing theoretical knowledge or providing pedagogical guidance: it requires attending to what is emerging in teachers' thinking and activity and making intentional mediational choices in response. Along those lines, identifying and capitalizing on *buds of development* can provide TEs with ways of targeting their mediation at teachers' current needs and ongoing changes. In this context, development emerges through the interaction between the teachers' existing knowledge and experiences, the ideal forms made available through mediation, and how mediation is refracted through teachers' *perezhivaniya*. In this dynamic, teachers and TEs co-create the conditions for development (i.e., SSD), while neither the direction nor the outcome of development can be fully predetermined.

Taken as a whole, promoting LTE practices from a Vygotskian sociocultural perspective entails understanding teacher professional development as a socially mediated, dynamic, and lifelong interactional process. This study shows how this perspective calls for teacher education initiatives that are structured, sustained, intentional, and theoretically grounded, while remaining responsive to teachers' situated contexts. Rather than offering a model for resolving the theory-practice divide in Brazil, such an approach reframes the relationship between theory and practice as a site of development in its own right. Ultimately, this orientation highlights the ethical responsibility of teacher education to create conditions for teachers to develop increasingly principled, critically aware, context-sensitive, and socially responsive ways of understanding and enacting their professional activities.

DATA AVAILABILITY STATEMENT: Data available upon contact with corresponding authors.

End notes

1. Although we acknowledge ongoing debates surrounding the term "second language", we use it throughout the paper to refer to any language other than one's mother tongue.
2. The BNCC is the official guidelines governing basic education in Brazil.
3. Perezhivaniya is the plural form of the Russian term perezhivanie.
4. The first author of this paper was the teacher educator.
5. For more information, see Agnoletto's (2024) doctoral dissertation.
6. Amelia is a pseudonym used to protect the participant's identity.
7. Although the concept of input continued to reverberate in Amelia's pedagogical decisions in both Cycle 5 and Cycle 6, data from the lessons taught during these cycles were not included in the analysis to avoid repetition and keep the discussion within the manuscript's length constraints.
8. For more details, see Agnoletto (2024).

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