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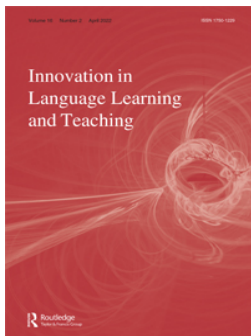
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# Guiding and assessing development of L2 writing process: the role of peer collaboration

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## ABSTRACT

This study, informed by Vygotskian notion of mediation and reporting on a partnership between a researcher (the first author) and a teacher (the second author), aims at exploring how peers' comments can inform teacher assessment and guidance of learners' L2 (second/foreign language) writing. The participants were 19 L2 English learners in an upper secondary school in Finland. We largely focus on the notes that one pair of learners made on each other's essays and how they responded to peer assistance. Triangulating these data with classroom observation and a questionnaire, we traced how learners co-constructed their understanding of how their texts can be developed. The foci and how the identified issues were addressed were similar within the groups but varied across them. The innovativeness of the activity lies in (1) the dialectical teacher-researcher partnership in which it was designed and which informed the analysis, simultaneously serving as teachers' assessment of learners' writing; (2) the learner notes serving as a source of information for the teacher and as a persistent mediational means for the learners. We discuss the findings with reference mediation and the dialectics of teaching, learning, and assessment, focusing on how teachers can use the information obtained from such notes..

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Mediation; process writing; sociocultural theory; classroom assessment; L2 English

## Introduction

For some time now, there has been a stronger focus in educational policies around the world on classroom assessment as an emergent and continuous process whose goal is learner development and which involves learners as active agents in the assessment process (Tsagari and Vogt 2017; Lynch 2001). However, tensions arise as teachers implement such continuous and dialogical assessment within the constraints of the classroom, including time, fulfilling learning outcomes, and learners' and teachers' beliefs and histories (Leontjev and Pollari, *submitted*; Davin and Herazo 2020; Williams, Abraham, and Negueruela-Azarola 2013). Teachers struggle to resolve these tensions as they try to create opportunities for collaboration and peer assessment and individualised support to learners.

Alongside the understanding of classroom assessment as a continuous and co-constructed process to support learning, the understanding of writing in L2 (second/foreign language) classroom

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changed from an individual process to that co-constructed with others (Prior 2006). This understanding of the writing process is informed by sociocultural theory (SCT), which places the social at the heart of the development process. Development happens as learners are first dependent on others and gradually become autonomous as they internalise the mediational means co-constructed in interaction with others and use these to regulate their own functioning (Vygotsky 1978). Writing, therefore, becomes a dialogical activity in which writers interact with others who, in a way, become their co-authors (Slavkov 2015; Prior 2006).

In this paper, we report on a writing activity collaboratively designed by a teacher (the second author) and a researcher (the first author) in an L2 English classroom where learners revised one another's texts. We will focus on the notes learners left on their peers' texts as they engaged in collaborative revision.

## Sociocultural theory and L2 writing

The argument for focusing on writing as a process has been known in the writing pedagogy for quite some time (e.g. D'Aoust 1986). Briefly, process writing is a pedagogical practice whose goal is not to 'merely lead students through the various stages of the writing process' (Seow 2002, 315–316) but to change learners' understanding of the writing process and to equip learners with skills required for reaching goals at different stages of it. Seow (2002) gives an overview of process writing stages. The goal of the **planning** stage is to encourage learners to write down ideas for writing. **Drafting** is a stage where learners produce a text. **Responding**—teachers and/or peers commenting on learner drafts—is, perhaps, the most essential in process writing. During the **revising** stage, learners modify their text taking into account the responding stage. Finally, the **editing** stage is where learners polish their texts before they submit them.

Emphasising the writing process with the goal of learner development and eliciting the role of both teachers and peers in learner development, process writing is congruent with the SCT perspective on the development of writing, which shifts the focus from writing as an individual activity to a process mediated by others (e.g. Sala-Bubaré and Castelló 2018). As our intention is not to provide a systematic review of process writing informed by sociocultural theory, we refer the reader to some excellent prior studies for a further overview (Barnard and Campbell 2005; Slavkov 2015).

In this paper, we concentrate on peer assistance and the way it guides learner writing. The reason for our focus is the tension between feasibility and the insights into learner abilities emerging from peer interaction. On the one hand, peer interaction is an essential part of process writing (Prior 2006; Slavkov 2015). On the other hand, it is difficult to attend to each of the pairs/groups of learners, so teachers miss much of the process of learners co-constructing their performance. Sociocultural theory further informs the understanding of the crucial role of peers in learner development.

From the SCT perspective, the role of peers in the writing process is understood with reference to the Zone of Proximal Development (ZPD), a range of emerging abilities that become visible and are pushed forward once external assistance becomes available to an individual (Vygotsky 1978). Hence, when learners' independent performance is assessed, only a part of their abilities becomes known. A fuller range of learner abilities emerges when their performance with assistance from others is considered (Vygotsky 1978). We will next outline some research focusing on peer assistance informed by SCT.

## Peer and teacher assistance from the sociocultural theory perspective

One of the first SCT studies of peer assistance in the L2 context was conducted by Donato (1994), who found that L2 French university students were able to collaboratively produce complex utterances in French using complex morpho-syntactic features. Donato (1994) further observed that these same learners were subsequently able to produce the same features independently. Ohta (2000) studied how two adult learners of Japanese worked collaboratively, tracing how one

learner reacted to requests for assistance and intuitively withdrew help as the other seized more responsibility for her performance. In the L2 writing context, De Guerrero and Villamil (2000), using a turn-by-turn analysis of learner interaction, observed two L2 English learners working collaboratively on revising a text produced by one of them. They found that peer assistance was not unidirectional but reciprocal, both learners becoming active partners in the revision task. Furthermore, the peers not only critiqued but also suggested writing and revising strategies and explained grammar points.

More recently, Soleimani, Modirghamene, and Sadeghi (2017) found that the groups of learners who collaborated on addressing the teacher's comments on their writing outperformed those learners who did so independently in accuracy and fluency in writing performance. Chen and Yu (2019), in turn, focusing on two key participants, explored how patterns of peer interaction and attitudes towards collaborative writing changed across collaborative writing activities. The important implication of the study for classroom practice was that learner attitudes towards peer assistance in writing can be mediated by the teacher.

The studies outlined in this section oftentimes draw on the notion of *scaffolding* (Wood, Bruner, and Ross 1976), which has yielded an impressive body of L2 classroom research. Recognising the merit of this research, we note that Xi and Lantolf (2021; see Veresov 2017; Vygotsky 2011) elicited the difference between the static metaphor of a scaffold, provided so that a learner completes a task, and the notion of *mediation*, which is about identifying functions in the process of maturing and nurturing their development. Mediation as an instructional practice goes beyond task completion towards helping learners to develop concepts and principles they can apply in a different context.

We wish to underscore that we do not want to build the argument for a difference between scaffolding and mediation, leaving this to conceptually oriented papers, such as that by Xi and Lantolf (2021). We also are not meaning to say that assistance focusing on task completion cannot result in development. Indeed, Davin and Donato (2013) reported that learners were at times subconsciously sensitive to their peers' ZPD, providing assistance to complete a task and withdrawing it as needed. Hence, despite the difference in intentionality, the outcome is often similar in that the development has taken place. In fact, the complementarity of teachers' and learners' assistance has been noted (e.g. Li 2012; Li 2005; Philp, Adams, and Iwashita 2013).

Another notable finding in peer assistance from the SCT perspective has been the oscillation of novice/expert roles. Donato (1994) noted that learners, being individually novices, can collectively be experts, together performing beyond each individual learner's ability. This can be explained with reference to Zone of Proximal Development. When performing independently, a learner relies only on those mediational means that have been internalised. Further mediational means become available through interaction with others on the interpersonal plane, which is more likely to result in a successful completion of the task. This argument has been built by several researchers (Lantolf and Beckett 2009; Wells 1999; Zuckerman 2003).

SCT research on development of learner writing often, though not exclusively, explored spoken peer- or teacher-learner interactions. However, other mediation modalities have, too, been explored. Notes (e.g. written comments) are particularly relevant as a mediational means in the development of learner writing. Alharbi (2020), in a process writing study of peers' and teacher's comments in Google docs, found that both served as scaffolds for developing learner texts. Kim (2020), exploring how different modalities afforded by digital technology mediate classroom interaction in a grade 5 science classroom, also noted the value of learner-made notes as mediational means. Kim (2020) illustrated that notes that learners made in response to the teacher's definitions of scientific concepts, created an opportunity for them to internalise these concepts. Indeed, unlike the transient spoken mediation during classroom interaction, notes can become more persistent means helping learners recall the context in which these notes (or comments) emerged, making it more likely for internalisation to happen.

How learners' ZPD emerging in peer interaction can be assessed and acted upon by the teacher is informed by the understanding that mediation both limits the way the learner can react to it and

creates possibilities for the learner to react (e.g. Feuerstein, Feuerstein, and Falik 2010; Poehner and Leontjev 2020). This understanding, hence, requires considering how exactly learners are mediated *and* how they engage with mediation.

Informed by the principles outlined above, teachers could mediate their learners, building on peer assistance. However, whereas researchers have the means and resources to follow several groups of learners, teachers could find it unethical to follow closely only a limited number of pairs or groups of learners, leaving less or no attention to others. Considering research outlined earlier, such as Kim (2020), peers' notes on learners' written texts can become a window into developmental processes emerging in peer collaboration. For this reason, in the present study, we focused on learners' written notes on their peers' essays during peer responding with the intention to explore the insights into learners' ZPD that these notes and how learners reacted to them can yield. This is an innovative focus that builds on the available, even if limited, research on learner written notes as mediational means with the particular emphasis on teacher assessment.

Another challenge we address is that, unlike researchers, teachers do not have resources to conduct a detailed analysis of their learners' collaborative processes. Furthermore, teachers, being practising professionals, are not always able to use theoretical concepts, such as those informing the present study, to develop their practices, especially if these concepts are presented to them in a unidirectional manner (Lantolf and Poehner 2014; Tsagari and Vogt 2017). To address this challenge, we conducted the present study informed by a dialectical teacher-researcher partnership—praxis—which we briefly outline in the following section.

## Vygotskian praxis and L2 assessment

The notion of praxis emerges from the understanding of educational practice as scientific research, where theory is used to change practice and is validated in it (Lantolf and Poehner 2014, 7–8). The relationship between teachers and researchers in praxis is that of a partnership. Researchers' task in this partnership is not simply describing but actively using theoretical principles to bring in a change. Teachers, in turn, cease being research subjects in classroom research, contributing as educational professionals and putting theoretical principles to the test in their practice (Lantolf and Poehner 2014). The outcome is the dialectical unity of praxis, where theory and practice co-develop and co-influence one another.

Vygotskian praxis has had different foci and has been conducted on various scales (see Lantolf and Poehner 2014; Davin and Herazo 2020). Considering our focus on assessment, a study by Lantolf and Poehner (2011) is useful to mention. The authors introduced a teacher of Spanish to the SCT concepts, such as mediation and ZPD. As a result of this partnership, the teacher developed her own classroom assessment procedures and activities informed by these theoretical concepts.

Our partnership takes a step further. We stayed true to praxis throughout the process, designing and conducting the study, analysing and interpreting the data, and reporting on the findings. In this paper, we focus on how learners' notes they wrote as a part of the activity of peer responding mediated their peers' (and their own) writing. To elaborate, we focus on exploring peer assistance as creating opportunities for learner development. We then discuss how, based on learners' notes and the development of learners' essays, teachers can further mediate the development of their learners' writing.

## Methodology

### Research question

The present study explored the value of notes as a part of peer interaction for teacher-based assessment of learners' writing. This goal was pursued by finding an answer to the following research question:

- 1 What insights into learners' L2 writing do the notes peers wrote on other learners' essays as well as learners' subsequent essay modifications yield?

We were interested in information about learners' areas of struggle and what learners consider important in writing and wanted to trace how learners address peer assistance in modifying their text, this giving a window into the internalisation of the peer assistance. The analysis was conducted collaboratively, and we employed theoretical concepts as we went through the analysis. Simultaneously, the analysis served as assessment of learners' writing process, yielding insights into learners' ZPD.

### **Participants and procedure**

The study was conducted in an English course at the upper secondary school in Finland. The participants were learners in the course ( $n = 19$ ). Twenty-four learners granted their permission to use their essays, the notes they made on their peer's essay, the observation notes the researcher made, and learners' questionnaire responses. However, only 19 learners were present during the peer responding session, and only 15 responded to the questionnaire. The procedure was designed together by the researcher (the first author) and the teacher (the second author).

The learners first each wrote an initial draft of their essay on a topic they selected among five available topics (Appendix 1), typing their draft on their laptops in the classroom. The teacher informed the learners that these drafts were not to be graded. In the following lesson, the learners were given their essays back and asked to form pairs or groups of three, exchange their essays, and write notes to their peers on their essays so that their peers could improve the quality of the essays. Following this, the learners discussed their notes with their peers. The learners were asked to give advice they would themselves like to receive on their writing. Subsequently, the learners were asked to take their commented essays home and revise them before submitting them to the teacher, who then delivered them to the researcher.

At the start of the whole activity, the learners were given a checklist they were advised to use during the entire writing process. The checklist contained a set of bullet points in each of the three categories on which the Matriculation Examination essay is scored: *communicativeness*, *content and organisation of the text*, and *language breadth and accuracy* (Appendix 2). The checklist served to guide peer assistance as well as for analysing the learner notes, as we will elaborate in the following. In other words, alongside learner notes, the checklist served as a mediational means to guide learner thinking during the revision of their texts as they interacted with their peers and as they modified their texts at home.

### **Data**

Our goal was a balance between the research value of the study and its practical applicability in the L2 classroom. Hence, when we designed the activity, we limited the data to essays with learners' notes, observation notes of learners' interaction, and a short learner questionnaire. While audio/video recording of learner interaction could have yielded deeper insights into learner assistance, this would have been impractical as part of a classroom activity.

The learners' notes and the two essay versions served as the main data. These were triangulated with the observation notes taken during the peer responding as well as a follow-up learner questionnaire. The questionnaire consisted of open-ended and Likert-scale items, of which two open ended items are discussed in this study (Appendix 3). The rest of the items elicited aspects not relevant for the present paper. Collecting learner feedback via questionnaires has been a common practice for the teacher, so it did not increase the learners or the teacher's workload. The learner questionnaire was anonymous, so the responses could not be connected to individual learners.

### **Analysis**

The data analysis was conducted together with the teacher and served as a model of how the teacher could assess learners' texts in the classroom. First, a qualitative analysis of the notes was

conducted, including studying the formulations, the foci, the length, the number of notes, and how these notes were presented graphically within each pair/group and among the pairs/groups. The analysis included coding the learner notes made using both an a priori coding scheme—the points of the checklist used by the teacher to guide learner writing (Appendix 2) and as well as whether the learner assistance focused on the task at hand or moved beyond the task. The a priori coding was supplemented by the grounded coding, which included the points not covered by the checklist and the agency the peers expressed and gave others in their notes.

The two essay drafts (prior to and following the peer responding session) were subsequently checked with the focus on how the learners modified their essays in response to the notes.

## Results

### *Peers' notes as guidance*

We analysed the whole data set, but we will mostly focus on one pair of learners whom we will refer to as learners C and D. We will occasionally refer to other learners to discuss the findings at a more general level.

Within pairs/groups, the notes that learners made on each other's essays were rather similar in terms of the number of comments and their length, the aspects that the notes targeted, their wording, and even how the notes looked graphically. The following [Figure 1](#) illustrates this.

[Figure 1](#) illustrates that the two learners' notes concentrated on rather similar aspects (points of the checklist), focusing on communicativeness, such as holding the reader's attention, and organisational features, e.g. making sure that there is one main idea per paragraph. The learners also chose English as the language of the notes and wrote their notes in a similar way, drawing their peer's attention to whole sentences or paragraphs, and even presenting their notes graphically in a similar way, using arrows and curly brackets.

To give an example, both learners noted the point of the clarity of the main idea in the essays, though differently. D noted the lack of it in C's essay, whereas C praised D for their elaboration in the second paragraph, which made the topic clear. Another example is how the learners noted the length of the sentences becoming an issue. D noted that while the first sentence in C's text was great, it was 'a little long.' Likewise, C noted that the first sentence of D's second paragraph was 'a bit too long', adding that otherwise, the paragraph was great. Therefore, this, as other points, is remarkably similar in their wording, hedging, and mixing points for development with praise.

Another similarity concerns giving agency to their peer, not explicitly suggesting how exactly they needed to change their texts, e.g. 'you could replace this with more opinions' (learner D) and 'maybe covering two points right at the beginning would make it more interesting' (learner C). Furthermore, C repeatedly notes that they are not a specialist in psychology. D's assistance, similarly, does not suggest how exactly C should change their text, unlike other learners, who provided explicit suggestions. Still, for the most part, D wrote their notes somewhat more directly, e.g. 'more examples related to everyday life'.

Across the pairs / small groups, the notes varied substantially. Learners R and S, for example, tended to suggest changes explicitly (e.g. replacing 'possibilities' with 'resources'; learner S in R's essay). Differently from them, learners N and O only underlined some words in each other's essays without further elaborations. The underlined issues in their case mostly referred to the choice of words. Each learner also provided a general note below their peer's text, both starting their message by noting the versatile vocabulary.

This suggests that the learners negotiated their assistance before they discussed the essays orally, or, perhaps, oscillating between making notes and discussing these notes with each other. Indeed, the observation notes made at the start of the activity reveal that the learners were showing the essays to one another, pointing, and discussing, which, too, suggests these interpretations.



2. Robots

People have had an urge to create a machine that could perform different kinds of tasks from hard and strength requiring jobs to pouring a cup of tea when needed. Or at least that's what inspired Karel Capek to coining the term "robot". Even though robots were created to help us, people do have quite different opinions about them.

To begin with the good and beneficial features of robots, when they are taking places in assembly lines and harder tasks, they free people from them. It gives people a chance to pursue other careers and do what they feel passionate about. That, for instance, makes a difference and has an affect on mental health. And of course robots are strong and precise. If coded properly, they don't make the same mistakes as humans do - they don't misread constructions or need calculators to help with counting.

On the other hand, robots can't replace humans when it comes to social situations and interaction. And how about empathy? Robots are coded to perform just their tasks and not too many are able to feel. And then there is THE question: Should we be concerned of robots rising up against us? Human has created artificial intelligence that can beat the best chess players on their "playground". How to turn off such an intelligent creature?

We can't know for sure what will happen in the future. Were we for or against the idea of creating more robots and developing artificial intelligence, we can't deny the fact that robots have come a long way and will take us even further. We just don't know where and when they will take us.

Notes:

- more own opinions, it is a comment
- the rein thought could be clearer
- more examples related to every day life, otherwise good paragraph
- this is really good and easy to read
- maybe replace some basic words with different words (for example good)
- answer some of your questions

Handwritten notes on the left side of the image include:

- check sentence a little long perhaps?
- interesting beginning, I'd maybe try to add some other thing than behaviour there, but that's not something I'd find necessary. Maybe covering two points right at the beginning would make it even more interesting
- maybe I'm not the higher person to give you feedback, I don't know much about psychology
- maybe change the last paragraph a little? understandable and maybe I should know more about psychology.
- You have considered your audience and fixed the text and vocabulary really well!

Handwritten notes on the right side of the image include:

- I liked the first paragraph!
- If I was a scientist...
- Since I was a little child, I've been very interested in human behaviour. How people behave and communicate have an impact on everyone and the reasons behind that behaviour are complex. No one can belittle the importance of psychology as it covers every human being. Therefore if I was a scientist, I would study psychology.
- I find psychology extremely fascinating to study and the matters to study in that area are endless due to the diversity of schools of thought in psychology. There are for example neuropsychology, behaviourism and cognitive psychology. For me, social psychology is the most interesting one.
- As a scientist I would like to do several studies in that area and maybe some day be mentioned among some of the most groundbreaking psychologists, like Freud. In my studies I would use a lot of simulations (social simulations, considering my psychological orientation) and study the process behind making decisions in those simulations. A couple research methods I'm fond of include questionnaires and observation, so I would be likely to use them.
- Scientists can either focus on a few bigger subjects in their career or do several small studies. When it comes to my personality, I tend to be interested in many phenomena at the same time. The same would probably apply when it came to my scientist career. In conclusion, it seems like I'd be a very versatile psychological scientist.
- lot of things
- concluded well

Figure 1. Learner D's notes on C's essay (left) and C's notes on D's essay (right).

Despite the differences across the groups, we classified only 10 notes in the total of 131 made by the 19 learners as potentially going beyond the task at hand. These gave more general advice that could be used when writing other texts. An example of such notes is the following [our translation] 'maybe more of those do not -> don't and they are -> they're so it doesn't feel so formal makes it more natural.' This note gives a learner a piece of advice with regard to how with the help of contractions, the formality of the text can be adjusted so that the text addresses the implied audience.

We explain this with reference to the activity in which the learners engaged. As they worked on a multi-draft essay, they naturally considered their goal to be helping their peers to make their text better. This, we highlight, does not imply that they did not learn or that the development did not happen. However, we cannot claim that the learners were able to use their peers' assistance in a different context, e.g. a different essay. Instead, we traced how the learners applied their peers' assistance in modifying their essays.

### Responding to peer notes

Most notes were followed up by the learners as they modified their texts—of the 131 notes, only 13 were not followed up in any way. These modifications ranged from changing a tense to rewriting whole sentences or paragraphs. We note that these modifications should be considered together with assistance from their peers. To illustrate the insights into learner performance and how teachers can use these in the following assessment, we return to learners C and D discussed in the previous section.

We first concentrate on the second draft written by learner C (Figure 2).

Learner C substantially modified their essay after discussing it with their peer, responding to most of D's notes (see Figure 2).

The first paragraph was entirely rewritten. There, the learner addressed two notes from D: (1) making the first sentence of the paragraph shorter and (2) making the main idea clearer. D's latter note did not refer specifically to the first paragraph, but it is there that the main idea is generally expressed. The last sentence in the first paragraph expresses the main idea more clearly as compared to the first draft ('Even though robots were created to help us, people do have quite different opinions about them'). This gives a window into how close learner C is to independent functioning. Namely, learner C reconstructed D's assistance and used it in their unique way. Learner C recognised, with the assistance from learner D, that the main idea of their essay was not clear. However, instead of modifying the part that D suggested, C engaged with their own text and modified it based on their understanding of how to make the main idea clearer. This suggests that the learner is rather self-regulated (even if not able to do it independently yet).

C also replaced one of the questions in the last but one paragraph with an answer to their question, responding to D's 'you should answer some of your questions'). C also responded to D's more focused suggestion to replace the repeated part in the final paragraph with their own opinion. Finally, in response to 'replace some basic words with different words (for example good)', C deleted the word 'good' at the beginning of the second paragraph of their essay. These points, particularly the latter one, were more direct. Hence, C was more likely to accept what D suggested verbatim, which they did. This, however, does not mean that the learner would not be able to do the same with less direct assistance (e.g. mentioning which word should be replaced). We will return to this and the previous point later when discussing how teachers can mediate learner development based on such insights.

People have kept on creating machines capable of performing different tasks to help with our everyday life. These robots have come a long way and now we are facing divergence in opinions about their future. Can a robot replace a human in the working life?

To begin with the beneficial features of robots, when they are taking places in assembly lines and more difficult tasks, people are freed of them. It gives people a chance to pursue other careers and do what they feel passionate about. Robots can be useful also in hospitals when monitoring patients. They identify every little change and report them. That way they help doctors take care of the patients right when needed. If coded properly, they don't make the same mistakes as humans do - they don't misread constructions or need calculators to help with counting.

On the other hand, robots can't replace humans when it comes to social situations and interaction. They are coded to perform just their tasks and not too many know empathy. And then there is THE question: Should we be concerned of robots rising up against us? Human has created artificial intelligence that can beat the best chess players on their "playground". Such an intelligent creature can trick us in many ways we don't even know are possible.

Maybe we should give robots a chance. They for sure won't replace humane interaction but there are chances we'll see even more of them in the near future. The valuable skills of robots and the empathy and intelligence of humans can make the future together.

**Figure 2.** Learner C: second draft.

A point, we suggest, important for classroom-based assessment is that despite the similarity of the notes, the learners responded to them in their unique ways. This becomes clear when D's modifications of their essay are considered (see Figure 3).

Learner D introduced fewer changes than C did. However, C hedged more in their notes. Thus, D may have found some advice less necessary to respond to as C, due to their hedging, gave more responsibility to D to decide whether to accept the assistance.

Still, D took most of C's notes into consideration. For example, D substantially changed the final essay paragraph in response to 'maybe change the last paragraph a little [shaded out] understandable and maybe I should know more about psychology,' removing more specialised vocabulary, e.g. 'versatile', from the paragraph. D also made their argument more accessible to the reader who is not a specialist in the field of psychology, which appears to be their response to C repeatedly stating that they are not an expert in the topic. Thus, the understanding of who the reader is in D's final essay is not that by the first or the second learner—it is *their* understanding, jointly constructed. D also addressed more direct notes made by C, following C's suggestion to add 'other thing than behaviour' to the first paragraph and splitting the first sentence of the second paragraph into two. We note, though, C and D gave the responsibility for how the modifications should be made to their peers. This is different from, for example, learner S, who only accepted the explicit correction made by R, replacing the word 'issues' in their essay with 'problems'.

If I was a scientist...

Since I was a little child, I've been very interested in human behaviour and what happens inside human brain. How people behave and communicate have an impact on everyone and the reasons behind that behaviour are complex. No one can belittle the importance of psychology as it covers every human being. Therefore if I was a scientist, I would study psychology.

I find psychology extremely fascinating to study. The matters to study in that area are endless due to the diversity of schools of thought in psychology. There are for example neuropsychology, behaviorism and cognitive psychology. For me, social psychology is the most interesting one.

As a scientist I would like to do several studies in that area and maybe some day be mentioned among some of the most groundbreaking psychologists, like Freud. In my studies I would use a lot of simulations (social simulations, considering my psychological orientation) and study the process behind making decisions in those simulations. A couple research methods I'm fond of include questionnaires and observation, so I would be likely to use them.

Scientists can either focus on a few bigger subjects in their career or do several small studies. I tend to be interested in many phenomena at the same time, so I'd perform as many studies as I could. In conclusion, if I was a scientist, I would be really busy studying social psychology and trying to discover something revolutionary. Beware science community, I might be coming for you!

**Figure 3.** Learner D: second draft.

The questionnaire responses corroborate this collaborative nature of the process. Seven learners out of fifteen who responded to the questionnaire mentioned the value of others' perspectives, e. g., 'it was especially useful to hear another perspective about the text and see your own text through the eyes of another person.' Another recurrent theme was that learners learned about the qualities of a good essay. This one is interesting, particularly with regard to the finding that the points the learners focused on in their notes was similar within the pairs and differed across the pairs/groups.

## Discussion

The goal of the study was to explore the insights into learner L2 English writing emerging from their peers' notes. This study was conducted in response to challenges that teachers face discussed by, for example, Davin and Herazo (2020) and Williams, Abraham, and Negueruela-Azarola (2013). Building on Alharbi (2020) and Kim (2020), we focused on learner notes both as a mediational means guiding learner writing and as information yielding insights into learners' mediated performance for the teacher. Differently from them, we did not just observe the learners' use of notes through the lens of sociocultural theory. We used theoretical concepts to modify and interpret the peer responding stage in process writing such that it yielded insights into learners' L2 English writing for the teacher. The further value of the activity we presented in the paper was that it was developed in praxis between the researcher and the teacher engaged in the partnership process as a practising educational professional.

In this section, we discuss the findings, focusing on how teachers can use learner notes on their peers' essays to understand and guide their learners' development. We, thus, propose a way for making classroom assessment truly a continuous development-oriented process (Lynch 2001), building on Vygotskian understanding of assessment, teaching, and learning as dialectically related.

Learners, when they made their notes on their peers' essays, negotiated what they focused on and the way they guided their peers' writing in their notes. They, therefore, together decided what they deemed important for improving the quality of the essays. The learners' notes, thus, were not unidirectional feedback but negotiated assistance which the learners applied in their unique ways. This becomes clear once learner notes are considered *together* with how the essays were modified. While the finding that peers' oral assistance on writing is not unidirectional is not new (Davin and Donato 2013; De Guerrero and Villamil 2000), it appears the co-constructed and dialogical nature of peer assistance is also true for the notes learners left on their peers' essays.

This gives valuable insights to teachers. For example, from learners C's and D's essays and notes they made (Figure 1), the teacher could not only see the issue with cohesion that both learners considered important but also that this issue occurred in both essays. That is, even though the learners were able to spot the issue in their peer's essay, they had that same problem in their own essay.

Learners' co-constructed performance can be assessed focusing on: (a) how learners' co-construct their understanding of issues and ways to address them and (b) what this process says about learners' ZPDs. This is exactly what we did in the present study, assessing the learners' initial drafts, the notes, and the modified essays with these two purposes in mind. The activity and its detailed analysis presented here is the outcome of our engagement in praxis. The process was, thus, both a research study and a classroom assessment activity.

Teachers can build on the information obtained from learners' notes and their peers' responsiveness to these notes in two related ways: checking if the learner can transfer the novel understanding to a different essay and checking whether learners are now able to see in their essays the issues they noticed in those written by their peers. Learners in our data rarely focused their assistance beyond the text at hand (see Davin and Donato 2013). However, this is not to say that they would not have been capable of applying it in a different context—the available research points towards the opposite (Davin and Donato 2013; Li 2012; Ohta 2000). We suggest that teachers, then, can find whether and to what extent learner development has occurred, that is, to what extent learners are able to mediate their own writing using the mediational means that emerged in peer interaction (the

window into which is provided in the notes). That is, teachers can use the information received about the learners to help them internalise these mediational means that emerged during the peer responding, or in Xi and Lantolf's (2021, 20) words, ensure 'the quality of the fruit that emerges from the growing process.'

Sociocultural theory informs how this can happen. Above all, peer assistance should be considered together with how learners respond to it, i.e. as a collaborative process in which peer assistance both limits how learners can react to it and creates new ways to react (see Poehner and Leontjev 2020). The directness of the peers' assistance and the way that the learners reacted to it in this study, accepting what the other suggested or changing the text in their unique way, can be interpreted with reference to how close the learners were to independent functioning. For example, C deleting the word 'good' implies that they might need more assistance to recognise and replace too general words in the text. That same learner changing the text to make the main idea clearer suggests that the learner was able to take more responsibility for addressing the issue, understanding where the main idea emerged in the text and how to make the idea more specific. Hence, the teacher, should a similar issue emerge in a different essay, could start with indirect assistance, e.g. 'think how you can make your argument clearer for the reader.'

In our study, the peers tended to correct learner grammar and vocabulary directly; yet, learners might have needed less of such assistance as they probably would have been able to correct the language themselves. This is where the teacher could check, for example, whether C is able to avoid using too general vocabulary in a novel text without any external assistance and, if not, refer the learner to the previous peer interaction. It should also be kept in mind that the peer interaction which resulted in C making the change in question was likely to increase C's responsibility for their performance in this regard—as ZPD is not static but ever-changing (Xi and Lantolf 2021). Recognising that mediation is about development, the teacher could first probe and develop the learner's understanding of why too general vocabulary can be a problem. The teacher could then work *together* with the learner to find out how the learner can resolve the issue and develop the learner's understanding of how the issue can be addressed during the writing process, e.g. when planning and revising. Such a collaborative process should entail the teacher gradually making the assistance less direct and detailed, giving the responsibility for performance to the learner once this assistance is not needed (Poehner and Leontjev 2020). To capitalise on the peer interaction, the teacher could build their mediation on the notes that the learners made on each other's essay, both in the teacher's written comments on learner writing and oral mediation.

## Conclusion

We note that we did not explore in this study how teacher mediation can impact learners' writing. Our goal was different: to show how a modification of the responding stage of process writing can yield insights into learner writing. In this regard, we should also highlight that the notes that the learners made reflected but a part of their interaction in which each pair/group constructed their joint understanding of points for development and how this development could be achieved. Hence, we do not know, for example, whether the issues reflected implicitly in the notes were discussed in a more explicit manner. However, one of the guiding principles of the study was feasibility—attending to each group of learners equally would be difficult, the outcome being, in any case, a fragmentary picture of peer interaction. Furthermore, the learners took their commented essays home; hence, these notes were likely one of the central mediational means in the revision process, triggering, perhaps, their recall of the interaction with their peers. We believe, therefore, this is a reasonable compromise that adds to the teacher's understanding of learners' performance and allows for promoting learner development.

In the increasingly multimodal L2 classroom, technology can offer further means for teachers to assess their learners (Alharbi 2020). However, it is precisely the multitude of assessment opportunities that should help teachers successfully mediate their learners' development. It is important



in this process not to forget to nurture learners' individual developmental trajectories. We believe the activity we outlined in the present paper aligned well with this goal. As the final note, we would like to, following Davin and Herazo (2020), call for more dialectical teacher-researcher collaborations in which teachers are partners with researchers contributing to the research process while researchers impact teaching practice.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

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## References

- Alharbi, M. A. 2020. "Exploring the Potential of Google Doc in Facilitating Innovative Teaching and Learning Practices in an EFL Writing Course." *Innovation in Language Learning and Teaching* 14 (3): 227–242. doi:[10.1080/17501229.2019.1572157](https://doi.org/10.1080/17501229.2019.1572157).
- Barnard, R., and L. Campbell. 2005. "Sociocultural Theory and the Teaching of Process Writing: The Scaffolding of Learning in a University Context." *TESOLANZ Journal* 13: 76–88.
- Chen, W., and S. Yu. 2019. "A Longitudinal Case Study of Changes in Students' Attitudes, Participation, and Learning in Collaborative Writing." *System* 82: 83–96. doi:[10.1016/j.system.2019.03.005](https://doi.org/10.1016/j.system.2019.03.005).
- D'Aoust, C. 1986. "Teaching Writing as a Process." In *Practical Ideas for Teaching Writing as a Process*, edited by C. B. Olson, 7–16. Sacramento, CA: California State Department of Education.
- Davin, K. J., and R. Donato. 2013. "Student Collaboration and Teacher-Directed Classroom Dynamic Assessment: A Complementary Pairing." *Foreign Language Annals* 46 (1): 5–22.
- Davin, K. J., and J. D. Herazo. 2020. "Reconceptualizing Classroom Dynamic Assessment: Lessons from Teacher Practice." In *Toward a Reconceptualization of Second Language Classroom Assessment*, edited by M. E. Poehner, and O. Inbar-Lourie, 197–217. Springer. doi:[10.1007/978-3-030-35081-9\\_10](https://doi.org/10.1007/978-3-030-35081-9_10).
- De Guerrero, M. C. M., and O. S. Villamil. 2000. "Activating the ZPD: Mutual Scaffolding in L2 Peer Revision." *The Modern Language Journal* 84 (1): 51–68.
- Donato, R. 1994. "Collective Scaffolding in Second Language Learning." In *Vygotskian Approaches to Second Language Research*, edited by J. Lantolf, and G. Appel, 33–56. Norwood, NJ: Ablex.
- Feuerstein, R., R. S. Feuerstein, and L. H. Falik. 2010. *Beyond Smarter: Mediated Learning and the Brain's Capacity for Change*. New York: Teachers College, Columbia University.
- Kim, H. Y. 2020. "More Than Tools: Emergence of Meaning Through Technology Enriched Interactions in Classrooms." *International Journal of Educational Research* 100. doi:[10.1016/J.IJER.2020.101543](https://doi.org/10.1016/J.IJER.2020.101543).
- Lantolf, J. P., and T. G. Beckett. 2009. "Sociocultural Theory and Second Language Acquisition." *Language Teaching* 42 (4): 459–475. doi:[10.1017/S0261444809990048](https://doi.org/10.1017/S0261444809990048).
- Lantolf, J. P., and M. E. Poehner. 2011. "Dynamic Assessment in the Classroom: Vygotskian Praxis for Second Language Development." *Language Teaching Research* 15 (1): 11–33. doi:[10.1177/1362168810383328](https://doi.org/10.1177/1362168810383328).
- Lantolf, J. P., and M. E. Poehner. 2014. *Sociocultural Theory and the Pedagogical Imperative in L2 Education: Vygotskian Praxis and the Research/Practice Divide*. New York, NY: Routledge.
- Leontjev, D., and P. Pollari. Submitted. Power, struggle, and mediation—resolving tension caused by high-stakes assessment in an L2 classroom.

- Li, S. 2005. "Scaffolding in Adult ESL Classrooms." *Foreign Languages in China* 2 (6): 24–30.
- Li, D. 2012. "Scaffolding Adult Learners of English in Learning Target Form in a Hong Kong EFL University Classroom." *Innovation in Language Learning and Teaching* 6 (2): 127–144. doi:[10.1080/17501229.2011.626858](https://doi.org/10.1080/17501229.2011.626858).
- Lynch, B. K. 2001. "Rethinking Assessment from a Critical Perspective." *Language Testing* 18 (4): 351–372. doi:[10.1177/026553220101800403](https://doi.org/10.1177/026553220101800403).
- Ohta, A. S. 2000. "Rethinking Interaction in SLA: Developmentally Appropriate Assistance in the Zone of Proximal Development and the Acquisition of L2 Grammar." In *Sociocultural Theory and Second Language Learning*, edited by J. P. Lantolf, 51–78. Oxford: Oxford University Press.
- Philp, J., R. Adams, and N. Iwashita. 2013. *Peer Interaction and Second Language Learning*. New York, NY: Taylor & Francis.
- Poehner, M. E., and D. Leontjev. 2020. "To Correct or to Cooperate: Mediational Processes and L2 Development." *Language Teaching Research* 24 (3): 295–316.
- Prior, P. 2006. "A Sociocultural Theory of Writing." In *Handbook of Writing Research*, edited by C. A. MacArthur, S. Graham, and J. Fitzgerald, 54–66. New York, NY: Guilford Press.
- Sala-Bubaré, A., and M. Castelló. 2018. "Writing Regulation Processes in Higher Education: A Review of two Decades of Empirical Research." *Reading and Writing* 31 (4): 757–777.
- Seow, A. 2002. "The Writing Process and Process Writing." In *Methodology in Language Teaching*, edited by J. C. Richards, and W. A. Renandya, 315–320. Cambridge: Cambridge University Press.
- Slavkov, N. 2015. "Sociocultural Theory, the L2 Writing Process, and Google Drive: Strange Bedfellows?" *TESL Canada Journal/Revue TESL Du Canada* 32 (2): 80–94.
- Soleimani, M., S. Modirkhamene, and K. Sadeghi. 2017. "Peer-mediated vs. Individual Writing: Measuring Fluency, Complexity, and Accuracy in Writing." *Innovation in Language Learning and Teaching* 11 (1): 86–100. doi:[10.1080/17501229.2015.1043915](https://doi.org/10.1080/17501229.2015.1043915).
- Tsagari, D., and K. Vogt. 2017. "Assessment Literacy of Foreign Language Teachers Around Europe: Research, Challenges and Future Prospects." *Papers in Language Testing and Assessment* 6 (1): 41–63.
- Veresov, N. N. 2017. "ZBR and ZPD: Is There a Difference?" *Cultural-Historical Psychology* 13 (1): 23–36. doi:[10.17759/chp.2017130102](https://doi.org/10.17759/chp.2017130102).
- Vygotsky, L. 1978. *Mind in Society: The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press.
- Vygotsky, L. S. 2011. "The Dynamics of the Schoolchild's Mental Development in Relation to Teaching and Learning." *Journal of Cognitive Education and Psychology* 10 (2): 198–211. doi:[10.1891/1945-8959.10.2.198](https://doi.org/10.1891/1945-8959.10.2.198).
- Wells, G. 1999. *Dialogic Inquiry: Towards a Sociocultural Practice and Theory of Education*. Cambridge: Cambridge University Press.
- Williams, L., L. B. Abraham, and E. Negueruela-Azarola. 2013. "Using Concept-Based Instruction in the L2 Classroom: Perspectives from Current and Future Language Teachers." *Language Teaching Research* 17 (3): 363–381. doi:[10.1177/1362168813482950](https://doi.org/10.1177/1362168813482950).
- Wood, D., J. S. Bruner, and G. Ross. 1976. "The Role of Tutoring in Problem Solving." *Journal of Child Psychology & Psychiatry* 17 (2): 89–100.
- Xi, J., and J. P. Lantolf. 2021. "Scaffolding and the Zone of Proximal Development: A Problematic Relationship." *Journal for the Theory of Social Behaviour* 51 (1): 25–48. doi:[10.1111/jtsb.12260](https://doi.org/10.1111/jtsb.12260).
- Zuckerman, G. 2003. "The Learning Activity in the First Years of Schooling." In *Vygotsky's Educational Theory in Cultural Context*, 177–199. Cambridge University Press. doi:[10.1017/CBO9780511840975.011](https://doi.org/10.1017/CBO9780511840975.011).