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M Khosronejad, L Weber & M Ryan

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# Teacher learning as a polyphonic endeavor: A context sensitive model of teacher professional development

M Khosronejad , L Weber and M Ryan

Faculty of Education and Arts, Australian Catholic University, Sydney, Australia

## ABSTRACT

Despite an increasing interest in the sociocultural aspects of teacher professional development and the recognition of context in teacher education, there is a lack of a conceptualisation of how professional learning occurs within and across various contexts. To this aim, we take up a view of professional learning that is dialogic and apply the concept of ‘polyphony’ to conceptualise teacher practice and teacher professional learning as the teacher’s orchestration of multiple voices within context. Inviting ‘polyphony’ to the realm of teacher education refers to the composition of multiple co-existing contextual affordances and constraints affecting teacher practice. It is the multitude of various and at times disagreeing voices surrounding teacher practice. Our proposed model offers a reflexive definition of ‘teacher agency’ that involves the recognition of the voices that the teacher draws upon so that they can be interrogated and deliberately invoked or suppressed in practice for particular contexts. We discuss two methodological implications including a polyphonic design methodology of professional learning opportunities, and a polyphonic education research method in addressing the problem of teachers’ implementation and adjustment to new practices.

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## Introduction

There are various models of teacher professional development (Kennedy, 2014), including transmission models—also known as traditional models—(e.g. training), transformative models (e.g. action research), and transitional models (e.g. coaching and community of practice). These models are often described based on their intended outcomes. The latter two PD models—also called reform models (Nawab et al., 2021)—are increasingly applied for their attention to the sociocultural nature of learning and the influence of context on teacher development. However, despite the adaptation of the situated learning perspective in teacher education and the recognition of contextual factors on the effectiveness of PD programs (Nawab et al., 2021; Saunders, 2014), there is a lack of a conceptualisation about how context affects teacher professional development.

**CONTACT** M Khosronejad  [maryam.khosronejad@acu.edu.au](mailto:maryam.khosronejad@acu.edu.au)  Faculty of Education and Arts, Australian Catholic University, 8-20 Napier Street, Sydney NSW 2060, Australia

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The question of context is important in teacher education due to rapid societal changes and technological advancements that surround the practice of teaching. For example, the predominant transition from face to face to online models of teaching during the pandemic posed a challenge to teachers and teacher education and called for new pedagogical approaches and practices. We were interested in the question ‘How is teacher practice and professional learning influenced by sociocultural conditions?’. To this aim, we apply a polyphonic approach to teacher professional development and propose a focus on teacher practice and teacher development that is context-sensitive. Our argument is constructed in three parts. First, we discuss the relevance of context in education and the role of agency. Second, we invite the concept of polyphony and develop a process-oriented approach to teacher education that is context-sensitive. In the third section, we draw on our recent experience working with teachers and explore the multivoicedness of teacher classroom practice. We further study how the voices within the context guided our collaboration with teachers and shaped their learning. Finally, we discuss two methodological implications of the framework for understanding teacher learning and teacher adjustment to new practices.

### **The relevance of context in education and the role of agency**

There is widespread interest amongst educational researchers in understanding the context dependent nature of learning and professional development (see for example Hamilton, 2018; Nawab et al., 2021; R. Khosronejad et al., 2021; Ryan et al., 2021; Ryan et al., 2022). The following discussion about the context dependent nature of professional learning and development aims to answer the question: How is professional learning shaped within context? We first define teacher learning—and professional development—as the process of *becoming*, social in nature, and situated in teachers’ own experiences and practices (Lave & Wenger, 1991; Zellermeier & Tabak, 2006). This view of learning implies a focus on the interaction between self—agency—and the context of learning—or the learning environment. Archer’s (2003) reflexivity theory provides an account of the context encompassing both structure and culture. The structural conditions are orders of context: systems, practices, and resources, and the cultural conditions are the prevailing norms, and beliefs of a particular community. For example, the structural conditions within an educational context include curriculum, and the cultural conditions include the importance ascribed to specific aspects of the curriculum (e.g. such as prioritising Mathematics and Literacy over other curriculum areas), and how the purpose of curriculum is framed by teachers and students in the organisation.

Because our focus is on teacher learning and professional identity development, we draw on literature about how identities are formed within context. Literature suggests two prevailing perspectives about the influence of context on identity development. First, a microprocess perspective of identity focuses on daily interactions and examines the role of identity agents such as the role of parents and teachers on students’ identities (Harrell Levy & Kerpelman, 2010). Second, a macroprocess view examines how identity formation is negotiated within macro level contexts influenced by social relations, and culture—what we collectively produce. The question of how micro level and macro level contexts intertwine and affect (professional) identities requires further attention (Beijaard et al., 2004). To what extent do individuals act intentionally as social actors

(Archer, 2000), actively and reflectively personifying their roles as teachers (Ryan & Barton, 2020) against the microlevel and macrolevel contextual conditions? Moreover, how do similar and contradictory contextual conditions compete to influence the interaction between self and environment?

Advocates of the deterministic view of identity highlight the structural powers and explore how subjects adopt available historical and cultural positions and how discourse determines individuals' sense of self in their experience of the world (Foucault, 1980). On the contrary, approaches with sociogenetic accounts of the self, consider individuals' active internalisation, and therefore, self-authoring becomes an integral part of learning and development (Baldwin, 1898; Holland & Leander, 2004; Mead, 1934). While the deterministic view puts structure to the fore and the sociogenetic accounts of self highlight the role of agency, our take on this debate is dialogic, meaning that self-other relationships are mutually fed by one another (Bakhtin, 1981). For Bakhtin (1981) self appears as a relational phenomenon and is constructed by the relationship between different perspectives. Hence, 'identities are never autonomous or independent but always acquire social meaning concerning other available identity positions and other social actors' (Bucholtz & Hall, 2005, p. 598). This view signifies the emergent nature of professional development and identifies culture and structure as emergent through human action (Archer, 2003; Mannheim & Tedlock, 1995). Therefore, similar to identities, structural relations and culture are seen to be produced by participants (Bucholtz & Hall, 2005), as they draw on multiple diverse voices in their interaction (Bakhtin, 1981).

We argue that the determination of teachers' practice is the outcome of a dialogic interaction between the teacher and the environment that creates space for both the teacher's dispositions and the sociocultural factors that affect them. Our argument is based on the above-mentioned premise that social phenomena are relational in nature. Teachers' action can be defined as dialogical and relational as it is continuously practiced towards an 'other' as teachers engage with other sociocultural conditions within their context.

In framing teacher practice and teacher action, we draw on Margaret Archer's view of human action and reflexivity (Archer, 2000). Archer places reflexivity at the core of her argument of human agency and decision making. She argues that our decisions are guided by our reflexive deliberations upon social and cultural conditions. Identities are formed within social structures and cultural systems with causal powers and humans respond to different social situations and their circumstances through reflexive deliberations. Consequently, any exploration of teacher practice and teacher professional learning requires understanding of how teachers navigate the sociocultural context of teaching and respond to the enabling and constraining effects of different contextual conditions.

An understanding of teacher professional learning and development within context as dialogic in nature requires a view of professional practice that involves dialogic interaction within micro level contexts—including interaction with social others—and within macro level contexts—while reading structural and cultural clues and responding to them. This dialogic view is of particular relevance to teacher education, as it attempts to equip teachers with capacity for the emerging aspects of various contexts (e.g. the classroom or the school). Against this background, we find the need to further conceptualise the role of context in teacher education and contribute to a better understanding of how teachers develop professional identities within and across different

settings. The following section aims to offer a context sensitive approach that helps explain the dialogic nature of teacher professional development.

### **Polyphonic education and teacher professional learning**

Polyphony is a type of multi-vocality that simultaneously incorporates two or more musical tunes and has its roots in the Greek words, poly—many, and phone—sound. (Naot-Ofarim & Solomonik, 2015). The contribution of the concept to education research and theory has been widely discussed in the literature to conceptualise teaching and learning (Naot-Ofarim & Solomonik, 2015; Ramsey, 2008; Schwarz-Franco, 2018; Skidmore & Murakami, 2012), or offer innovative methodological approaches to data analysis (van Oers & van Oers, 2002). For example, in her work ‘Managing To Learn: The Social Poetics of a Polyphonic Classroom’ (2008), Caroline Ramsey depicts management education that involves the creation of polyphonic classrooms. She draws on Bakhtin’s conceptualisation of polyphony and adapts his language of hero, idea, and linkage principles (plot) to discuss opportunities for collaborative and co constructive learning. In her argument, a hero-student and idea (academic theories) converse in ways that generate new learning experiences. Learner ownership and authority over the learning process and the teacher’s designed activities and coordination of classroom interaction both contribute to the formation of a polyphonic ‘classroom’.

This article builds on a definition of dialogic classroom interaction that looks at the interplay between personal conditions, structural conditions, and cultural conditions in the classroom and the ways that the teacher orchestrates various voices within a classroom (R. M. Khosronejad et al., 2023). We adapt a definition of polyphony as multivoicedness—that is concerned with multiple voices within context—rather than voices of participants with consciousness. Our Archerian interpretation of context calls for the investigation of voices related to both structure and culture. These voices include the voices from policy, curriculum, the school in which teachers work and researchers. We aim to apply the concept of polyphony in teacher learning to provide recommendations for professional development.

### **Teacher professional development: narrating the voices within context**

In telling the story of our collaboration with primary school teachers in recent years, we focus on a group of teachers at a co-educational public school located in a suburb of the major city of Sydney. We started our collaboration with this group of teachers in late 2019 as part of a larger funded project which aimed at improving writing in Australian primary schools. Since then, we have worked continuously alongside teachers at different intervals to provide support and training. Data collection has been in accordance with the standards and guidelines of the Human Research Ethics Committee at the authors’ home institutions and the equivalent body at one schooling system. We approached our goal of improving classroom writing by providing sustained, evidence-based professional learning for the participating teachers, an approach which has been shown to be effective in other learning areas (Gore et al., 2021) Our collaboration had two main phases. During the first phase, ethnographic data was collected to understand the ‘current’ practices and contextual factors which shaped the writing instruction of these teachers. The second

phase involved teachers participating in co-designed professional learning sessions to reflect on collected data and provide context specific training for teachers. During the intervention phase, teachers were guided by evidence collected during the project and were encouraged to improve their teaching practices with ongoing support from the research team. The following sections examine the polyphonic nature of teacher classroom practice and teacher learning. We first present an example of the multitude of voices present in teacher practice and then narrate how teacher learning was polyphonically shaped throughout their participation in the professional learning intervention.

### ***The polyphonic nature of teacher classroom practice***

Across both phases of the collaboration, the classrooms of participating teachers were observed and recorded by the research team. Our method of observation included recording classroom interactions and transcribing the audio for close analysis of talk. This allowed us to capture the polyphonic nature of classroom talk and understand the complexity of each classroom context. Here, we focus on the emergence of polyphony through the voice of the teacher and show how a multitude of voices are present in her voice. Our analysis aims to reveal how the teacher responds to multiple voices surrounding her practice and is not concerned about whether these voices have become a part of teacher's voice. The analysis of classroom polyphony supported our development of the professional learning we provided because we were able to understand what contextual features emerged organically in the day-to-day interactions between the participating teachers and students.

The first talk sequence (Talk sequence 1) highlights the polyphonic nature of one teacher's voice which includes the voices within macro level contexts—the curriculum—and the voices within micro level contexts—related to her students, the professional learning provided by the research team, and the writing culture of her school. Our analysis reveals the multitude of voices present in her practice, and the way this shapes her professional identity. This is particularly relevant to our study because we had the aim of improving the teaching of classroom writing. Writing is a complex site for the voice of the author to be expressed and heard while simultaneously revealing the impact of context on identity (Dutton et al., 2018). Our approach to writing echoes Bakhtin's argument that 'each word tastes of the context and contexts in which it has lived its socially charged life' (Bakhtin, 1981, p. 293).

#### *Talk Sequence 1:*

Finally, I could taste the disgusting smoke as I coughed. Wow, what did you love about that one, anyone?

I could hear the majestic bird chirping in my ear. Brr, brr, brr went the motor on the boat that the king was trapped on. The crackling fire was giving me a headache. Ooh, that sent shivers down my spine as I was reading it Holly, 'cause I loved that it made my body shiver and it made me go ooh, me too. Fantastic work. So, those descriptive words and those adjectives, that's what I want to see in your task today. All right, your challenge is you are going to be coming up with—this is actually going to be your planning page this time. And you're going to be coming up with your own story, if you were Aaron Becker, our author—now can I tell you something really cool?

... some of this writing that we do today, we could maybe even share some of these things with him too. So just have that in your minds as well, that he, the author or the illustrator of these books, we might be able to contact him. So that's—I'm, I'm trying, okay. How amazing is that? 'Cause Holly's face is like aww, wow.

Teacher: I could hear the crowd screaming and the birds swooping above me. As I looked around, I could smell the cold, fresh water beneath me. I could touch the scaly rhino that I'm now sitting on and I could taste the smoke all the way behind me. What did you love about that? Someone tell me something, Zara?

Student: There are adjectives.

Teacher: Adjectives. Remember, adjectives are our describing words and that's what I wanna see today too, so many adjectives in here.

Student: Um, um senses.

Teacher: The senses that she used, I could hear, I could taste, I could feel.

Student: She said [unclear] she said the beamy.

Teacher: The [unclear] the beamy rainbow, great. Here's Jacob's—get ready. As I trampled through the door, I could see flames bursting out of the rusty, old watchtowers and guards torturing the prisoners. My heart skipped a beat. I could—ah my heart skipped a beat. Could I be next? I could hear the gushing waterfalls and people screaming in horror and the remarkable sounds of the terrorising flames. I could smell the smoke and I could smell the sweet smell of new, fresh water. I could feel the fresh water as dirt and grass breezed across my face in the wind.

Student: Like you can like smell and the taste.

Teacher: Smell, taste, definitely. Sophie? There's another little one.

Student: Um adjectives he used like, like some adjectives.

Teacher: Yeah, some great adjectives there too. Um who else have I got here? Holly's I've got here too. I just picked random books, so all of them, all of them are amazing. As I walked through the dark, damp, cave—not just the cave, the dark, damp cave—I could see the colossal castle with red, smoky fire coming out of the top. I could feel the squishy, wet sand beneath my toes and I could smell the fresh, breezy air. The horrible yelling of the skinny, little guards made my heart thump and my body shiver. Ooh.

Student: Yeah, what?

Teacher: I've actually—and I haven't heard back, but I've actually . . . . . contacted Aaron Becker to see if we can—and I'm not sure, but I'm telling you that I have—to see if we can even make another Zoom call or something . . .

The opening of this talk sequence highlights the multitude of students' voices and the voice of the curriculum in the polyphony of the teacher's voice. The teacher incorporates the voice of the curriculum to encourage students to create texts using descriptive language. Additionally, the students' contribution to the polyphony of the teacher's practice includes three key features. The first feature is the voice of the students' texts which emerge when the teacher reads the texts out loud for the class to provide feedback: 'I could hear the crowd screaming . . .', 'As I trampled through the door . . .', 'As I walked through the damp dark cave . . .'. The teacher draws on multiple textual voices in her lesson which highlights the polyphonic nature of her approach to modelling the task. The second feature is the voice of the students' responses to the teacher's questions, as she mirrors their replies to consolidate their learning: 'Adjectives, remember adjectives are our describing words'. Reflexively, the students' writing encompasses the voice of the teacher. The use of adjectives in their writing samples highlights the way they integrate their teacher's voice into their own textual voices as authors. This emphasises the dialogic nature of the teaching of writing in particular, as the teacher's instructional voice emerges through the voice of the student text, and vice-versa.

The description of adjectives as 'describing words' is the third feature of the students' voices in the polyphony of the teacher's voice, as 'describing word' is the definition of an adjective that is known to the students. That is to say, the teacher uses the language of her students' knowledge to communicate with them in a way that they can understand. This practice of addressivity speaks to the dialogic nature of the teacher's practice in engaging with her students and the subsequent polyphonic nature of her classroom. Analysis of the layered nature of emergent student voices through the voice of the teacher underscores the complexity of polyphony in the teacher's voice and the way that the teacher's professional identity and the writerly identities of her students are reflexively formed.

The voice of the researchers can also be heard in the texture of the teacher's voice here. Initial findings from phase one of the study indicated that teachers are often constrained by pre-determined commercial writing programs which limit the potential for authentic writing opportunities (Ryan et al., 2021). Prior to this classroom observation, the researchers invited participating teachers to prioritise creating authentic audiences and



purposes for their students' writing activities as a response to this contextual finding. It is clear in this talk sequence that the discussion about inviting the children's book author, Aaron Becker, to the classroom and proposing the students share their writing with him, appeals to the intervention request to provide authentic audiences and purposes in the writing classroom. This emergence of the voice of the research team, alongside the voices of students and the curriculum, highlights the patchwork of perspectives this teacher has adopted in her practice.

The second sequence (Talk sequence 2) of talk further reveals the impact of the initial project finding involving the influence of commercial writing programs. The teacher's voice is joined by the voice of the program in use at her school, called '7 Steps to Writing Success'. The voice of the program has its own discourse with specific terms it has coined to describe narrative writing practices. This includes beginning a fictional story with a 'sizzling start' and follows with the stages of narrative conflict building in gravity as a 'pebble, brick, boulder'. It is of note that the teacher describes this as the 'correct structure of a narrative' in her instruction to students. The voice of the teacher as an individual professional is superseded by the voice of the writing program as the authority. In relation to this teacher's identity, we argue the emergent voice of the program highlights the impact of commercial writing programs on teacher professional identity, as it becomes woven into the fabric of classroom talk. Without an understanding of this teacher's specific context regarding the culture of writing at her school and the school's adoption of this writing program, the voice of the program may be mistaken for her own. This has important implications for considering teacher professional identity, as discourse analysis is an established tradition in educational research for understanding how teachers construct their professional views of themselves (Jordhus-Lier, 2021; Rex & Schiller, 2009; Sinclair & Coulthard, 1975). Context-specific inquiries into discourse analysis are crucial to capture the reality of the polyphonic nature of teacher identities.

*Talk sequence 2:*

Teacher: We're learning to write our own imaginary story, based on *Journey, Quest* and *Return*, okay. Things that I'll look for is that we've got the correct structure of a narrative —what's a narrative again Rustin?

Rustin: Um a story.

Facilitator 1: A made up story, very good; our structure, that we have a sizzling start. We then have our pebble, brick and boulder. We've got all these problems that happen in our story and then we resolve, or we have a solution for that story at the end, okay, so it all kind of becomes happy. Then we're looking for adjectives, that you're awesome describing words, that you use your five senses; that you've got paragraphs to break up your story. Now what do I mean by first person, does anyone know? What do I mean by writing in the first person? Zara?

Our analysis of the teacher's polyphonic classroom practice reveals the complex, and context-specific nature of teacher professional identity. The teacher's voice comprises a network of perspectives, including the curriculum, her students, professional learning experiences, and exposure to commercial programs. Our approach to this talk sequence reveals the concept of 'teacher learning' is polyphonic because it is influenced by multiple voices and perspectives that ultimately make up a 'truth' (Klamann, 2014). In the case of

this study, truth relates to the way writing should be taught to the students in this classroom. We elaborate on teacher learning as a polyphonic endeavour in the next section.

### ***The polyphonic nature of teacher learning and professional development***

Our collaboration with the school created an interesting polyphonic space reflecting the voice of different social actors—students, parents, teachers, principal, and researchers—and the voices from the context beyond the school—for example, voices formed through policies governing the education system. As Naot-Ofarim and Solomonic (2015) argue, within the polyphony each voice emerges independent from other voices while being accompanied by a meaningful addressivity of other voices, producing one meaningful work of art as a whole. Polyphony grants value to each voice and accepts that various voices have different positions while they accompany and oppose each other in a dialogical relationship. In our first meeting with the group of teachers and the principal, we presented our goal, as ‘improving classroom writing’, and our approach as an ‘evidenced based context sensitive approach’ to teaching writing. Through our dialogue with the school team, they further reflected upon their practice and voiced their concerns about the pressure they face due to standardised tests and the co-existing and somehow contradictory voice of parental expectations. It was noted that parents expected their children to enjoy extracurricular activities and prioritised children’s participation in such activities over the time spent to excel in the national standardised test NAPLAN. Hence the circumstances surrounding the practice of teaching was depicted in a variety of ways and the concept of ‘teacher learning’ had an emerging meaning led by the interplay between such various voices and through polyphonic interaction.

The polyphonic nature of teacher professional development was further evident throughout the second phase of the intervention, where the analysis of classroom observations informed a context-specific approach to collaborative design interventions. This included co-designing writing lessons informed by the project’s findings regarding the need for a more contextualised approach to teaching writing and an emphasis on authentic audience and purpose. For example, two of the participating teachers worked with the researchers to plan a sustained writing activity where students wrote short stories for publication in a school anthology. The anthology was described to students as possessing the purpose of publication to be shelved in the school library. The design of this activity was entirely context-specific because each teacher took their own approach to the task and drew on the individual interests of their students and the curriculum requirements to set the task expectations and the theme of the anthology. In other words, each teacher implemented the co-design activity by adopting the voices of their students, the research team, and the curriculum. This approach maintained polyphony while silencing the voice of the commercial writing program.

In the first classroom (Year 3), the teacher acknowledged and valued the voices of her students by recognising their interest in dragons. As a result, her classroom published an anthology of short stories about each individual child’s unique fictional dragon character (Figure 1.) Furthermore, she acknowledged the voice of the curriculum and linked the lesson to the New South Wales Syllabus for the Australian Curriculum by encouraging students to ‘create texts that adapt language features and patterns encountered in literary texts’. The children were encouraged to draw on their knowledge of ‘descriptive words’

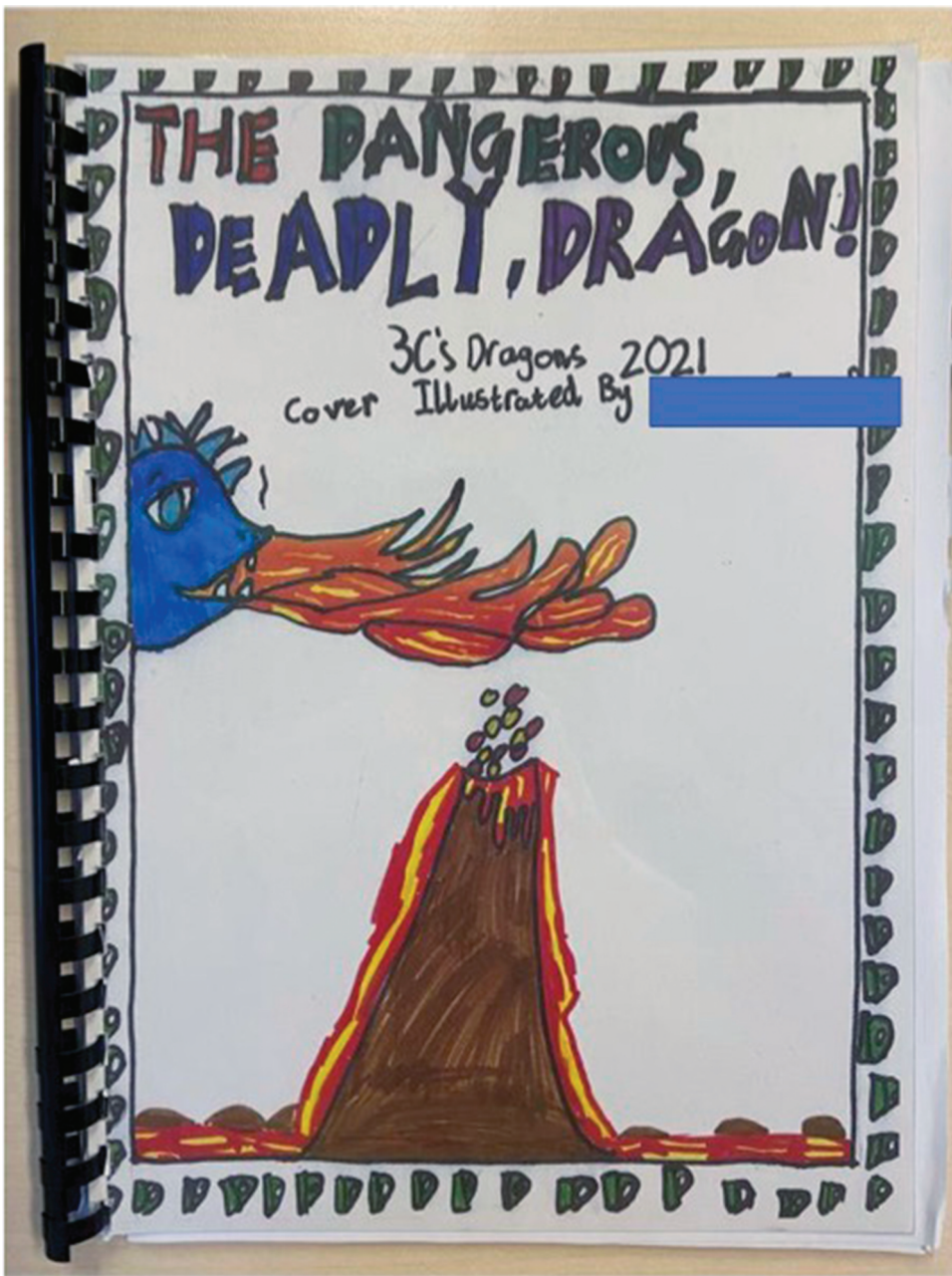


Figure 1. Year 3 publication.

and practised this knowledge in pre-writing activities where they labelled drawings of their dragon characters with adjectives. The teacher then instructed them to integrate these adjectives into their short stories. This focus is exemplary of the way research teams must negotiate the voice of the curriculum when proposing new teaching methods to PL participants. While the team would have liked to complicate the teacher and students'

understanding of the function of language features, we were aware of the constraints our participant teacher and her students faced related to time, and the accountability of the curriculum. As a result, we focused our support in this instance on providing an experience of writing for an authentic audience and purpose.



Figure 2. Year 4 publication.

In the second classroom (Year 4), the teacher took a broader approach to the theme by allowing students to select their own topic, all related to the concept of ‘adventure’, and involving the mysterious disappearance of a prized object (Figure 2.). This teacher adopted the voice of the curriculum by highlighting the presence of conflict in narrative writing for her students, an element of the same ‘patterns encountered in literary texts’ curricular focus. She explained the concept of conflict to her students by describing it as a ‘problem’ their character(s) encounter in the story and attempt to solve. This was explored through the disappearance of their chosen fictional object. While both teachers engaged with the same *principles* of the intervention regarding creating authentic audiences and purposes for their students’ writing and allowing for sustained periods of student writing time, the *approach* to the task and its implementation was unique to each teacher and dependent on the voices surrounding their practice. They also drew on similar features of the curriculum while interpreting its language differently. For example, the first teacher drew on language features as functions of fictional text, while the second teacher drew on the plot-driven element of conflict to teach her students about literary fictionality. We argue that this context-specific approach makes space for polyphony by valuing the multitude of student view-points while simultaneously supporting the construction of the teachers’ professional identities as agents of change through evidence-based approaches to teaching writing. We also recognise the necessity of pragmatism for teachers as they balance the constraints of their profession and manage the needs of the curriculum and the expectations of their school culture. Our voices as researchers intervening in their professional practice had to speak to the curriculum and listen.

At the end of the intervention, both teachers expressed the way the children valued their outputs, as well as the impact the experience had on their personal and professional confidence in teaching writing. The first teacher described in an email how she was ‘so proud!’ of her students and stated, ‘I can’t believe they did these all on their own!’. Later, she expressed feeling ‘more confident in teaching writing’ because of her involvement in the collaboration. The second teacher described feeling surprised by her students’ interest in the task, writing to the researchers, ‘They are so excited, when I told them that sport was cancelled tomorrow due to the rain, they cheered. Never thought they would cheer for writing over sport, but they proved me wrong!’. We know this teacher’s confidence in teaching writing has improved dramatically because following the intervention she provided professional development to her colleagues in the form of modelling the knowledge she gained from the collaboration. Overall, in relation to our focus on improving classroom writing, we argue that professional learning interventions involving the teaching of writing lend themselves particularly well to a polyphonic approach because of the contextual nature of language and the centrality of voice to authorship.

## Discussion and conclusion

Our findings extend earlier research about the polyphonic nature of teaching practice (Schwarz-Franco, 2018) and show teacher professional learning as a polyphonic endeavour due to the multitude of voices within the context that influence teacher identity formation. Where Bakhtin proposed a polyphonic theory of the novel, we propose a polyphonic model of the teacher’s identity and professional development (Bakhtin,

1981). This view offers a reflexive definition of ‘teacher agency’ that involves the recognition of the voices that the teacher draws upon so that they can be interrogated and deliberately invoked or suppressed in practice for particular contexts. The reflexive agency enables teachers to discern the voices in their contexts and deliberate about their prioritisation and hybridisation in order to dedicate intentional teaching practice to their context (Ryan & Barton, 2020; Ryan et al., 2021). In our illustrated case, the teachers negotiated the voice of identity agents within the micro context of the classroom (similar to the findings of Harrell Levy & Kerpelman, 2010) as well as the voices within the macro contexts (e.g. the curriculum) in order to create an engaging writing experience for students.

We argue that there are two methodological implications to the polyphonic and reflexive approach to teacher agency. First, it calls for a *polyphonic design* methodology of professional learning opportunities where the multiple voices that make up the texture of each teacher’s context are recognised and understood. The polyphonic approach makes the recognition of context an integral part of effective professional learning and positions teachers as active agents in the process of their development, rather than framing their engagement as passive participants. Archer’s theory of reflexivity (Archer, 2003) provides analytical tools for this purpose (Ryan et al., 2021). The three constructs of personal, cultural, and structural emergent properties help identify voices within the personal realm of teacher practice and the outside world towards a polyphonic teacher learning experience. Furthermore, facilitation as a methodology that promotes agency and polyphony (see for example Baraldi et al., 2023; Farini et al., 2023) can be used for listening to these voices, and co-planning targeted actions to support teachers engaged in professional learning to develop their professional identities.

The pursuit of reflexive polyphony in teacher education calls for the facilitation of the teachers’ internal conversations—about their ‘concerns and contexts’—and the development of the teachers’ projects to promote these concerns and advance what they care about most within their contexts (Archer, 2007). Internal conversation is about the manner in which humans—as active agents—reflexively make their way through the world (Archer, 2007). Facilitation of teachers’ internal conversations and reflexive deliberations about their concerns and context enables teacher’s agency and can position them as active agents against some of the constraining effects of the structural and cultural conditions. Facilitation has been used as a method to enable children’s agency and encourage polyphony (see Farini et al., 2023). Similarly, in the context of teacher education, applying facilitation methods supports teacher’s agency and the understanding of polyphony. Focusing on and facilitating teacher’s narratives about their contexts is about the role played by the teacher’s subjectivity to mediate between the existing voices—including one’s own voice—in the light of the perception of their constraints and enablements. We conclude that teacher agency is exercised through reflexive internal conversations and the facilitation of their internal dialogues in the development of the personal projects. What this means for teacher education is that teachers should be acknowledged as the co-authors of their learning experiences (Gore et al., 2021; Juuti et al., 2021; Ryan et al., 2022), to work alongside teacher educators in forming their (personal) projects based on their internal conversations.

Second, the proposed approach has implications for education research. The polyphonic and reflexive view of teacher agency is central to the exploration of inquiries

about teacher adjustment to new approaches and teacher implementation of new practices. The contexts in which teachers perform is influenced by the presence of multiple voices across different levels, such as the macro level voices of national policies and the curriculum, and micro level voices of students' individual characteristics and school demographics. Additionally, the context in which teachers educate is changing rapidly due to factors such as technological advancements and changing societal expectations. It is 'only by striking the right balance between personal, structural, and cultural' conditions that it becomes possible to explain what teachers do and how they perform, rather than relying on correlation studies where the relationship between 'group membership' and 'action patterns' are explored—'which are necessarily lacking in explanatory power.' (Archer, 2010, p. 124) Hence, any exploration of teacher implementation of new innovative practices, requires an understanding of teacher performance as the orchestration of the voices that exist within and across multiple contexts.

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### Notes on contributors

*Maryam Khosronejad* (ORCID ID: 0000-0001-9749-5000) is a Postdoctoral Research Fellow at the Faculty of Education and Arts, ACU, North Sydney. Her teaching and research focus on two areas: 1) professional learning and development, particularly teacher learning; and 2) student learning through interaction with humans and digital resources. Her recent research is in teaching of writing in primary schools and theories of reflexivity.

*Lauren Weber* is a Senior Research Assistant in the Faculty of Education and Arts at Australian Catholic University. Her research straddles the disciplines of Arts and Education, with a focus on the relationship between the teaching and learning of English literature and empathy. Her other research areas include the teaching of writing in primary education and the teaching and learning of Shakespeare.

*Mary Ryan* (ORCID ID: 0000-0003-2237-9368) is Professor and Executive Dean of Education and Arts at Australian Catholic University. Her research is in the areas of writing pedagogy and assessment, teachers' work in, and preparation for, diverse classrooms, reflexive learning and practice and reflective writing. Her Australian Research Council Discovery projects are in the areas of classroom writing and preparing reflexive teachers for diverse classrooms. She is a Principal Fellow of the Higher Education Academy in the UK.

## ORCID

M Khosronejad  <http://orcid.org/0000-0001-9749-5000>

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