Pedagogical translanguaging as "troublesome knowledge" in teacher education

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Abstract

This paper reports on the shifts in understanding experienced by participants in a postgraduate initial teacher education course designed around pedagogical translanguaging as a core theoretical and pedagogical concept. Throughout the semester-long unit, teacher education students engaged with culturally and linguistically responsive teaching approaches by reflecting upon and shifting their understandings of how plurilingual students' home languages can be celebrated and included in classroom teaching, even when English remains the medium of instruction. However, adopting pedagogical translanguaging as a concept and practice was not without its challenges, with both monolingual and plurilingual teacher education students having to confront and overcome deep-seated beliefs that "English-only is best".

Using a grounded approach to analyse teacher education students' written reflections and transcripts from semi-structured interviews, our research found that learning about pedagogical translanguaging presented teacher education students with what Meyer and Land (2003) refer to as a threshold concept, which opened up new and previously inaccessible ways of thinking about linguistic diversity. Our teacher education students faced challenges in redefining their positions as they encountered counterintuitive beliefs about language and teaching, alongside the necessity to reevaluate their own language identities. Our analysis reveals that pedagogical translanguaging represents troublesome knowledge for these students, often leading them into an uncomfortable liminal space, with the practical application being the most troublesome hurdle.

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Introduction

Each year, Australian universities produce over 16,000 new schoolteachers who must adhere to a defined set of professional standards (Australian Institute for Teaching and School Leadership [AITSL], 2017). One of these standards highlights the necessity of effectively teaching students from diverse linguistic, cultural, religious, and socioeconomic backgrounds. This is particularly important given that 38% of students in Australia come from language backgrounds other than English. Consequently, new educators are strongly encouraged to embrace the various languages and cultures present in their classrooms through approaches such as translanguaging (García, 2009; García & Wei, 2014). However, many newly graduated teachers find that they have had inadequate training to implement these inclusive teaching practices effectively (Dobinson & Dovchin, 2021).

This in-depth study focuses on the experiences of three postgraduate teacher education (TE) students participating in a course titled "literacy across the curriculum for diverse learners" that focused on pedagogical translanguaging (Cenoz & Gorter, 2022) as a foundational theoretical and pedagogical framework. This was a new course designed to familiarise students with Australian Professional Teaching Standard 1.3: "Know students and how they learn: demonstrate knowledge of teaching strategies that are responsive to the learning strengths and needs of students from diverse linguistic, cultural, religious and socioeconomic backgrounds." (AITSL, 2017). Throughout this semester-long program, TE students worked on developing culturally and linguistically responsive teaching strategies by critically reflecting on and reevaluating their understanding of language use and instruction. They learned about the significance of creating classroom environments that embrace children's home languages while simultaneously supporting effective content learning through English as the medium of instruction.

We consider pedagogical translanguaging to have been a threshold concept (Meyer & Land, 2003, 2006) for these TE students in their exploration of classroom practices which support linguistic and cultural diversity. While the course enhanced their understanding, it also introduced significant challenges in both theory and practice. TE students, regardless of being monolingual or multilingual, needed to navigate a liminal space as they confronted and reassessed their deeply held belief that "English-only is best" in Australian classrooms. This process required them to engage with translanguaging as troublesome knowledge (Perkins, 1999), which, in its various forms, represents the fundamental challenges that novice learners face when dealing with threshold concepts. In this context, TE students needed to reconcile their traditional views of language with more inclusive and flexible teaching approaches.

The significance of the study

In this paper, we contend that understanding pedagogical translanguaging as troublesome knowledge is crucial for addressing the complexities that multilingual classrooms can present.

An analysis through this lens reveals insights into the cognitive and emotional challenges teachers face, allowing for tailored professional development that equips them to navigate these obstacles. A better understanding has the potential to foster a supportive environment for both teachers and students, ultimately leading to more effective implementation of translanguaging strategies that enhance learning and promote inclusivity. We believe that recognising and addressing these challenges helps ensure that translanguaging practices enrich learning and classroom interactions while also validating students' linguistic identities.

Research into teacher beliefs and understandings indicates that measuring changes in these perspectives can be quite challenging (Pajares, 1992; Tschannen-Moran & Woolfolk Hoy, 2001). Our experiences of working as teacher trainers in multilingual contexts around the world (including sub-Saharan and North Africa, Mexico, United Kingdom, and Australia) indicate that the framework of liminality is a useful heuristic when discussing changes in TE students' beliefs and understandings. Defined as "a suspended state of partial understanding, or 'stuck place'" (Meyer et al., 2010, p. 9), the learner will typically waver back and forth between established and emerging understandings (Cousin, 2006a, p. 4). As we listened to our TE students' reflections on learning about pedagogical translanguaging, they revealed mixed understandings, showcasing both pre-liminal and transitional liminal ideas regarding the essence of translanguaging pedagogy (Cousin, 2006a). Below, we will provide the theoretical background on the concepts of pedagogical translanguaging, troublesome knowledge and liminality to frame our study.

Pedagogical translanguaging

The practice of integrating children's home languages and cultural practices into the school curriculum was originally introduced in Australia by Bakamana Yunupingu (1990), who established the "Both ways education system" in 1989. This approach recognised traditional Aboriginal teaching alongside Western methods. However, the term 'translanguaging' was originally coined by Welsh educator Cen Williams in 1994, to describe the way his students moved between Welsh and English, drawing on all of their linguistic resources, to complete classroom learning tasks. This practice contrasted with existing notions of languages as autonomous entities delineated by fixed boundaries where speakers engaged in language crossing or code-switching (Martin-Jones,1995). Translanguaging has since become a widespread theoretical and pedagogical concept, owing to the work of Ofelia García who expanded the term to describe a dynamic practice where multilingual speakers leverage their communicative resources to maximise their communicative potential (Wei & García, 2017).

Within the contemporary educational landscape, multilingual perspectives are increasingly integrated into classroom practice. The United Nations Convention on the Rights for the Child (Article 305) states that "it is the rights of children who are of minority or Indigenous background to use their first language and practice their culture and religion", and a large body of translanguaging evidence-based research (D'warte, 2024; Sánchez et al., 2018; Tai & Wong,

2023) makes visible the importance of valuing a student's linguistic and cultural knowledge and experience, or 'funds of knowledge' (González et al., 2006). Pedagogical translanguaging describes various practices, all of which are planned by the teacher with a pedagogical purpose and use resources from the students' whole linguistic repertoire (Cenoz & Gorter, 2022).

In the context of initial teacher education, pedagogical translanguaging is a key framework to build professional skills, knowledge, and understanding of the needs of linguistically and culturally diverse students in Australian educational contexts (AITSL, 2017). TE students are now encouraged to consider alternatives to English as the only medium of instruction when teaching plurilingual learners (Wong & Tai, 2023). This approach represents not only the interrogation of traditional teaching practices, but also the emergence of new understandings of language and learning which are usefully encapsulated in Meyer and Land's (2003) idea of a "threshold concept". The path towards these new understandings will typically involve the encountering of what Perkins (1999) has described as "troublesome knowledge". We adopt this framework as a tool to assess the nature of the difficulties our TE students encounter as they grapple with translanguaging as a pedagogy.

Troublesome knowledge within the threshold concept

The threshold concept effectively explains why certain areas of knowledge are inherently challenging to understand, and that coming to understand them may involve a gradual and often uncomfortable process. Meyer and Land (2003) describe this process as "akin to a portal, opening up a new and previously inaccessible way of thinking about something. It represents a transformed way of understanding, interpreting, or viewing something, without which the learner cannot progress" (p. 1). They draw on discussion from Perkins (1999) in their characterisation of the nature of a threshold concept and identify five key characteristics: they are transformative, often irreversible, potentially bounded to another discipline, unable to be integrated with other discipline knowledge, and can be troublesome, as illustrated in Figure 1:
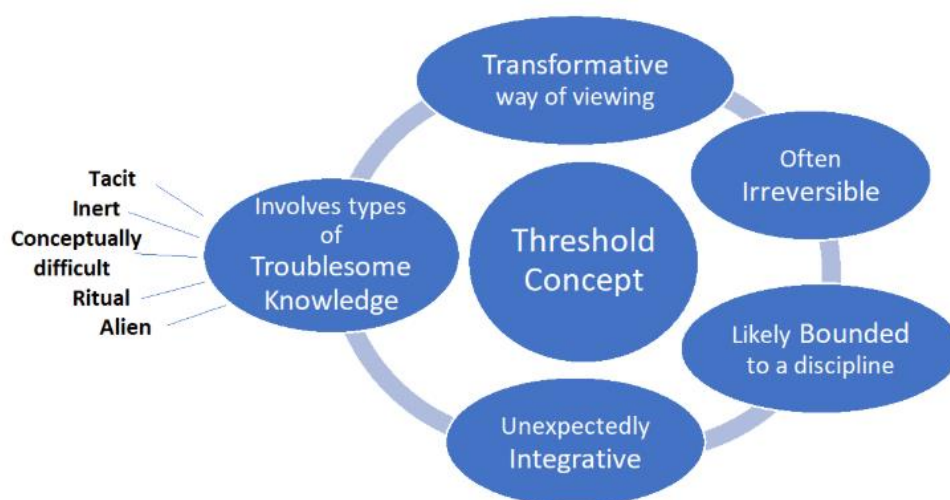

Figure 1. Characteristics of a threshold concept (after Meyer & Land, 2003).

Research studies examining how TE students have responded to transformed understandings about language (e.g., Moloney & Saltmarsh, 2016), reveal that many expressed anxiety about how to activate their linguistic expertise in the classroom. More recent research confirms TE students' struggles with implementation of translanguaging pedagogy in the context of the school (Hinojosa Pareja & López López, 2018; Iversen, 2020; Lew & Siffrinn, 2019; Tai & Wong, 2023).

In view of the growing body of discussion which highlights the significant hurdle which practical implementation presents in traversing the threshold of pedagogical translanguaging, we have found it useful to build on Alyafaee (2023), who labels the areas of struggle ELT teachers encounter in applying theory to practice as "practically difficult knowledge". Findings from our research lead us to add a sixth label of 'practical knowledge' to Meyer and Land's (2003) typology of troublesome knowledge (Figure 2). This allows for the incorporation of the challenges novices face in applying theory to practice as a fundamental aspect of a threshold concept:
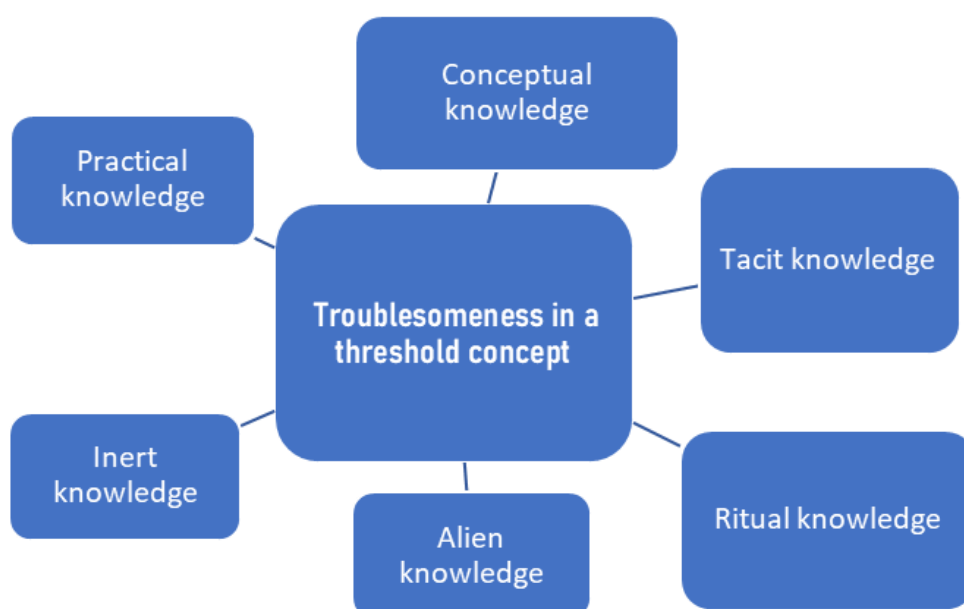

Figure 2. Troublesome knowledge as a characteristic of a Threshold Concept (adapted from Alyafaee, 2023; Meyer & Land 2003, 2006; Perkins, 1999).

Within this framework of troublesome knowledge, 'ritual' knowledge manifests as unexamined routines at the subconscious level (such as expected patterns of behaviour within a classroom), while 'inert' knowledge manifests in its lack of connectivity and practical integration into related areas (such as facts learned in preparation for exams). 'Alien' knowledge represents enduring beliefs that hinder understanding (such as 'English-only is best') and both 'tacit' and 'conceptually difficult' knowledge involve unexamined ideas—tacit knowledge being specific to a discourse community (such as recognising but being unable to explain grammatical errors within a text), and conceptually troublesome knowledge arising from unfamiliar insights (such as learning linguistic structures which are not part of a student's home language). Our sixth

type of troublesomeness, 'practical knowledge', is characterised as the difficulty of applying underlying understandings in one's practice: without an understanding of how to apply new knowledge, the threshold into a transformed understanding cannot be fully crossed.

It is expected that a threshold concept will be troublesome in one or more of these six ways and the process of grappling with threshold concepts will involve a journey of questioning and adjusting one's worldview. This transition can be conceived as occurring within a liminal space which entails navigating messy, nonlinear paths across conceptual terrain (Cousin, 2006a).

Liminality

Liminality is often conceived as a complex learning path. Meyer and Land (2006), for example, characterise this path as a transformative journey in the form of a continuum consisting of four stages: preliminal, liminal, postliminal, and subliminal. However, as Cousin (2006a) notes, mastering new knowledge is a nonlinear process which involves constant configuration and reconfiguration and can require uncomfortable emotional repositioning. This recursive view of the process of complex learning can be depicted as approaching new learning through a preliminal stage of rote or chunk learning before moving on to a reconstitutive stage where fundamental shifts of belief begin to emerge. This then leads into a postliminal consequential stage where conceptual boundaries are crossed until eventually understandings become irreversibly instinctual, at the subliminal stage. This recursive continuum of liminality is depicted in figure 3 below.
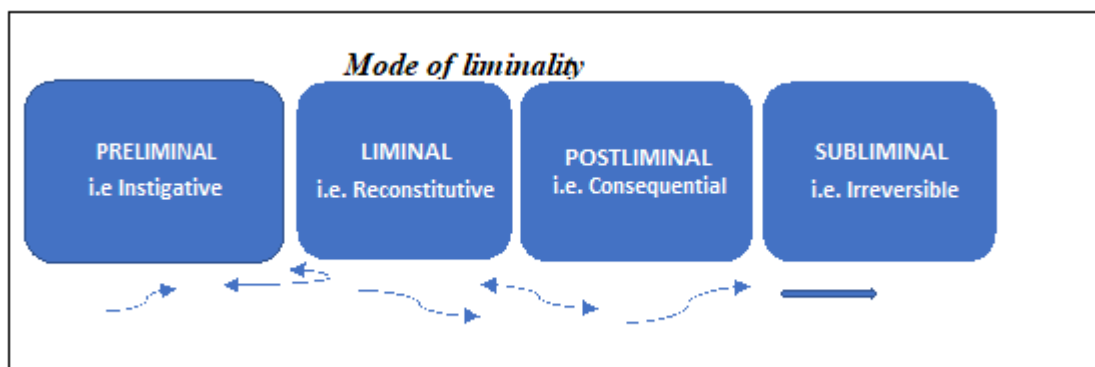

Figure 3. The liminal journey towards mastering a threshold concept (adapted from Cousin, 2006a; Land & Meyer, 2010).

We have found this framework of liminality useful in characterising the ontological and systemic journeys through the threshold concept of translanguaging in our study. From our observations at the outset, or instigative stage, on encountering a threshold concept a novice will resort largely to memorisation and the learning of chunks of information which allows for not much more than a mimicking of ideas and behaviours. This preliminal stage then evolves into a series of stages in which there is a reconstruction of understandings: firstly, previous

understandings are replaced by new ones and a shift in beliefs and actions begins to emerge; from this liminal space there then develops a deeper transformation of original conceptions as links are made across conceptual boundaries and the novice now finds themself able to "talk the talk". This is not, of course, a uni-directional process, and during the transition from a preliminal to a postliminal stage of understanding, there will be frequent regressions as a novice navigates their way through this process of mastery. These regressions diminish as the new understandings solidify and the novice achieves mastery; upon reaching the subliminal stage where understanding is fully consolidated, these new ways of thinking and of doing become irreversible and ultimately instinctual.

The study

This in-depth study was part of a larger research project that followed 45 postgraduate teacher education students enrolled in a mandatory unit titled "Language and Literacy across the Curriculum" at a large metropolitan Australian university. Nine TE students volunteered to give interviews, and here we report on 3 of these participants. The course explored various topics related to policy, theory, pedagogy, and assessment for teaching in culturally and linguistically diverse secondary classrooms. Instruction included topics such as multilingualism, cultural and linguistic funds of knowledge (González et al., 2005); scaffolded language learning for EAL/D learners; pedagogical translanguaging and case studies of intensive language programs. The unit also included a three-week practicum allowing participants to apply their knowledge in their specialist teaching areas. The participants specialised in a diverse array of secondary teaching subjects, including English, Languages, History, Mathematics, Economics, Geography, and Science.

Aims of the study

In this grounded qualitative study, we aimed to understand the troublesome knowledge (Perkins, 1999) related to the postgraduate teacher education unit described above, which focused on translanguaging as a core theoretical and pedagogical concept. We sought to identify the challenges our participants faced when applying a translanguaging approach during their practicum and conducted semi-structured interviews with nine student-teachers from the cohort. Their insights formed the basis for our research questions:

- To what extent does the theory and practice of pedagogical translanguaging pose troublesome knowledge for TE students preparing to teach students from diverse linguistic, cultural, religious, and socioeconomic backgrounds?
- What (mis)understandings do TE students have regarding the implementation of pedagogical translanguaging (i.e., types of troublesome knowledge)?

Our findings prompted us to explore which types of troublesome knowledge most obstruct TE students' progress through the phases of liminality comprising the threshold concept of pedagogical translanguaging.

Data collection and analysis

Data for this part of the study were collected from nine participants using three sources: forum posts, an end-of-semester assignment, and semi-structured online interviews. This ensured a rich set of data and provided opportunities to triangulate each participant's epistemological understandings and the sources of troublesome knowledge. Our discussion focuses on three participants: Amy and Baaz (pseudonyms), both speakers of English as an additional language, and Nic (pseudonym), a monolingual speaker of Standard Australian English. Baaz specialises in Maths and Economics, Amy teaches Maths, and Nic teaches Science.

We employed a grounded, qualitative research methodology to uncover teacher education students' epistemological understandings, allowing for an exploration of complex and often nuanced phenomena. A discourse analytic lens was used to examine how students conceptualised knowledge, the processes they engaged in while learning, and the specific challenges they encountered in their educational journeys. This helped us to uncover underlying assumptions in participants' language, offering insights into how teachers interpret and apply concepts like translanguaging in their classrooms. Additionally, a grounded approach promoted flexibility and responsiveness in the research process, allowing us to adjust our focus and probing as new themes and insights emerged during data collection and analysis. This adaptability proved crucial in leading us towards an understanding of pedagogical translanguaging as troublesome knowledge.

From our data analysis, we found that the participants' conceptual problems could be roughly sorted into 3 main categories: interpretations of what is meant by addressing cultural and linguistic diversity to support learning in the classroom'; perceptions of one's own lingualism as a determiner of a teacher's ability to support learning in plurilingual classrooms; and feeling prepared to deliver lessons which integrate appropriate translanguaging techniques. In sifting through the data, we then found that within each category various sources of 'troublesomeness' (see figure 2) began to emerge, leaving us with subsets of types of trouble within each category. Our discussion here addresses the most prominent type in each category: from Perkins (1999), tacit knowledge (category 1) and conceptual knowledge (category 2); and in recognition of the participants' struggles to translate theoretical knowledge into practice, we drew on Alyafaee, (2023) for our third category of practical knowledge. It was from this analysis that our themes emerged (see below).

By using Cousin's (2006a) model of liminality (see Figure 3), we were then able to evaluate the apparent transitions in understandings as revealed through the data. This analysis then confirmed the extent to which translanguaging presents a threshold concept in our teacher education unit.

Findings and discussion

We set out above how our data invited us to investigate the sources of troublesome knowledge in teacher education students' understandings of translanguaging pedagogy within three categories: tacit knowledge (Perkins, 1999), conceptual knowledge (Perkins, 1999), and practical knowledge (Alyafaee, 2023). From our analysis, three key themes related to these sources of troublesome knowledge have emerged:

a) Tacit knowledge: Linguistic differentiation for EAL/D Learners.
b) Conceptual knowledge: The relationship between teaching effectiveness and linguistic ability.
c) Practical knowledge: Transitioning from theory to practice.

Perkins notes that certain forms of challenging knowledge stem from subtle differences within a knowledge category that often go undetected. Such knowledge typically resides in specific communities where members assume a shared understanding of key concepts. We believe the teaching profession is an example of this phenomenon. In our data, "pedagogical translanguaging" is a concept frequently taken for granted, and discussions of how it can be used to support differentiated language instruction and affirm cultural knowledge often lacks detailed explanation. This gap is evident in the discrepancies between the way TE students cite theoretical concepts from literature and their explanations of how they apply these ideas in their own practices, as demonstrated below. We go on to discuss each of these themes in turn.

Theme 1: Tacit knowledge: Linguistic differentiation for EAL/D learners

The excerpts examined here come from our TE students' final assignments and forum posts, where they reference their readings to support their claims. These assignments encourage careful thought and reformulation, revealing apparent contradictions in the participants' interpretations of the literature, which indicate the presence of troublesome knowledge. For example, in Nic's analysis of a lesson where he effectively draws on the translanguaging literature, his conclusion suggests a conflict of ideas.

> *Translanguaging strategies such as those provided are excellent approaches to teaching EAL/D students as they are can form connections between their home language and English (Cummins et al., 2005). It is critical that teachers facilitate these connections whenever possible, and notetaking, creating glossaries and discussing concepts in their home language are great opportunities for students to form their initial understanding (Ollerhead, 2018).* ***However,*** *it is* **also** *the responsibility of the teacher to develop EALD students' English proficiency (Dixon, 2018).* [Nic - Final assignment] [emphasis added]

On the one hand Nic acknowledges the value of classroom strategies for connecting learning content with the learner's home language, but he then appears to suggest that translanguaging

can only be implemented *at the expense of* learning English. This juxtaposition of discourses suggests only a partial grasp of translanguaging as a pedagogy.

Further evidence for this pre-liminality can be seen if we compare the above synthesis of translanguaging with his discussion on the topic in interview. Here he is being invited by the interviewer to illustrate how he provides opportunities for his learners to draw on their linguistic funds of knowledge:

> NIC: *I just utilise things that would help students with different backgrounds. Help understand, and if they can learn it in their language. Then they don't then try and convert over to English. It would be that would be so amazing. It's I guess it's hard to say...yeah, I don't know. It's it's kind of two quite contradictory positions.* [Nic - Interview]

His assertion that "*It's kind of two quite contradictory positions*" is revealing of the struggle he is facing as he seeks to relinquish the dominant discourse of "English only" and reconfigure his understanding of the role of home language as a valuable fund of knowledge in the classroom.

A similar disjunction can be seen in Amy's forum post, where she identifies classroom segregation as a problem for translanguaging pedagogy:

> *The use of translanguaging in classrooms not only enhances cognitive development but also fosters the construction of identity… it empowers students to enhance their understanding of abstract concepts in English by connecting them with familiar terms from their native languages, bridging their daily experiences with classroom instruction (Conteh, 2018). A potential challenge with using translanguaging is classroom segregation, as students may cluster by language, isolating different language groups**. *To prevent this, I lead discussions in multiple languages, including English, promoting inclusivity and unity in math education.* [Amy - forum post]

Amy expands on the role of identity construction, identifying a legitimate issue in *"isolating different language groups"*. However, her somewhat impractical solution—suggesting that the teacher *"lead discussions in multiple languages"*—indicates a partially developed understanding of translanguaging pedagogy. Similar to Nic, this tacit understanding becomes more evident during her interview discussion and presents a significant obstacle:

> RES.: *So are you quite confident to identify language issues in your students' work if if you need to, like we asked you to do in the assessments?*

> AMY: *Hmm.... Where are the issues? What? How do we describe them? How do we give feedback and what will we do to improve the students' performance? For me it's really hard, because ...I don't really have a proper training in*

> *grammar, so I don't know anything about grammar…I sort of have to put in a lot of effort to sort of know … it'll be really hard to teach. because sometimes that's me as well.* [Amy - Interview]

Despite appearing clear about the need to address her learners' language issues, Amy seems to identify language issues as occurring only at the level of grammar. This somewhat old-school view of what should be taught in schools is framed in terms of her personal deficit in pedagogical grammar and skills. This tacit understanding seems to be drawn from her own language issues (*"that's me as well"*) and prevents her from considering a more contemporary view which resonates with translanguaging—that of language as discourse.

Unlike Nic and Amy, Baaz relies less on literature citations in his forum posts and focuses more on his personal learning journey. He discusses this journey extensively in his interview, and, in response to a forum task concerning a lesson example, he emphasises the importance of cultural and linguistic funds of knowledge in learning, drawing on his experiences as an EAL student:

> *With my own non-English speaking background in western academia, I could identify with the entire lesson. The research driven knowledge that a student's own linguistic knowledge and skills (L1) can be extremely instrumental to the student's development of corresponding abilities in a foreign cognitive/academic language (L2) strongly resonates with my own academic journey.* [Baaz - Forum post]

He demonstrates further this postliminal understanding of translanguaging pedagogy in consequent forum posts, discussing how he would use a multilingual ecology as a framework for organising an oral language task. A multilingual ecology (Creese & Martin, 2003) describes the relationships between multiple languages and the environment in which they are used, in this case the linguistic interactions that occur within the classroom. As Baaz explains here:

> *Since EAL/D first language knowledge can be positively transferred during L2 acquisition, I would design the critical part of this class's (applying for a job) learning content in L1.*

And:

> *I will organise my classroom in a way that allows the learners to feel language-friendly and encourages students to share their languages…I would design multiple groupwork activities. This would allow me to build a learning environment that supports translanguaging.* [Baaz - Forum post]

He draws together these examples of how he could integrate a multilingual ecology in his teaching by referring back to the professional standards that this unit of his MEd programme sets out to deliver, further indicating how he appears to have crossed into a post-liminal understanding of translanguaging:

> *A good teacher, actually, as part of our professional standards, really is that we are able to teach to cultural and linguistic diversity. And that means… analysing the language. It means planning for the language. It means knowing your students and where their language is.* [Baaz - Forum post]

It is noteworthy that unlike Nic and Amy, Baaz rarely draws overtly on the literature in his forum posts and refers repeatedly to his own learning journey when discussing translanguaging pedagogy. "*The research driven knowledge that a student's own linguistic knowledge and skills (L1) can be extremely instrumental to the student's development of corresponding abilities in a foreign cognitive/academic language (L2) strongly resonates with my own academic journey*", he tells us. Indeed, his comments here in his forum posts, and later in his interview, suggest that individuals with significant lived experiences of a threshold concept are better equipped to fully unpack and understand it. We will revisit this idea under theme 2, below, where Baaz recounts how his journey through *"Western academia"* has been one of struggle and how his *"non-English speaking background"* has significantly influenced his conceptual understanding of translanguaging pedagogy.

Theme 2: Conceptual knowledge: The relationship between teaching effectiveness and linguistic ability

A second type of troublesome knowledge identified by Perkins (1999) is conceptual knowledge, which arises when ingrained beliefs are challenged. Learners may be able to recite a concept from memory, but their intuitive beliefs resurface and hinder their progress. This entanglement is evident in data extracts from student-teachers whose understanding of translanguaging pedagogy appears obstructed by their perceptions of their linguistic abilities.

For example, Nic views his monolingualism as a barrier to effective teaching in multilingual classrooms, while Amy, who speaks English as an additional language, discusses her struggles in the classroom as a result of her limited English proficiency. Both TE students adopt a deficit perspective regarding their linguistic skills, believing they affect their ability to effectively teach EAL/D learners.

When asked about his language learning experiences, Nic describes his background in a largely apologetic manner, emphasising his essentially monolingual status:

> NIC: *So I've, I've, yeah, born and raised in Sydney. Mum's, my mum's dad was born in Greece. And she speaks Greek to her parents. Yeah, I, we never went to Greek school or anything. Unfortunately, not. So I picked up, I don't know, a few things from that, like just words here and there. …and I mean, other than learning Japanese in year 8. That's, yeah. Unfortunately, that's my background to be honest.* [Nic - Interview]

Nic intuitively views his monolingual status as "unfortunate", and this belief influences his perception of the ideal profile for teachers in Australia's multicultural classrooms as being plurilingual. For example, when the interviewer asks about his experiences with implementing translanguaging pedagogy, he reverts to this belief and expresses regret over his linguistic shortcomings.

> NIC: *It would be great if I could, I know this, so, I'm not gonna learn different, like, you know ten different languages assigned, but it would be great to know. I could just utilize things that would help students with different backgrounds. Help understand, and if they can learn it in their language then they don't then try and convert over to English. It would be, that would be so amazing.* [Nic - Interview]

In his view that plurilingualism is an "amazing" skill set for today's teachers, Nic overlooks the fact that the implementation of pedagogical translanguaging is not dependent on a teacher's being plurilingual, but more on their ability to create and plan opportunities for translanguaging in the classroom. Nic's views reveal that he has only a liminal understanding of this threshold concept.

Similarly, Amy, who speaks English as an additional language, also sees effective translanguaging pedagogy as dependent on the teacher's language skills. However, unlike Nic, she believes that her lack of English proficiency hinders her ability to provide appropriate instruction in her multicultural classes. When the interviewer prompts her to discuss how she implements translanguaging pedagogy, she seems to confuse it with the broader need for 'clarity' during the explicit input stage of a lesson (our emphasis).

> RES.: *So in your professional standards for teachers, for example, there is like reference to cultural and linguistic diversity… do you feel like you are prepared properly for that?*
>
> AMY: *I think it's a long way to go for me… What, what I struggle with is really classroom instruction more than the theory.* ***So now, I'm trying to write script for my, like teaching, which I think local students or teachers doesn't need it.*** *For me, we, we need it because to explain the same concept… I know in a textbook kind of way how to explain it. But now, okay, giving instruction to the student… It's like,…****So how do I use…like the the common language the student will understand? I think we sort of know the theory behind, but applying that into the teaching area, it's a long way to go.*** [Amy - Interview] [emphasis added]

Amy holds an intuitive belief that teachers who speak English as an additional language are at a disadvantage compared to their English-native peers. She perceives herself as being in a deficit position regarding her ability to apply pedagogical knowledge in practice. Even when praised for her language use in the classroom, she quickly clarifies that it reflects her mentor's

script, stating, "It's not mine!" This response indicates that her negative self-view is deeply ingrained:

> AMY: *So now what I'm developing, it's like ...my supervisor explain each concept right? And I will use it in my next lesson. And then sometimes people say, "Hey, I really like how you explain this concept. "It's not mine!", I said... I've got a lot of quotations and ... it's really good that every time I explain this concept, I can use that phrase.* [Amy - Interview]

Interestingly, when the interviewer encourages Amy to shift her focus from her own language difficulties to how she supports her learners' linguistic diversity, she recognises that her examples are not relevant to language differentiation for student learning. This acknowledgment that she is somewhat off-track indicates that Amy is in a liminal rather than preliminal stage regarding this threshold concept.

> AMY: *Maybe explain the CONCEPT more in calc [calculus]. That's why they don't understand. So it give me a hint that what I should look at is how to tune my instruction more.*
>
> RES.: *So maybe that sense of differentiation, language differentiation?*
>
> AMY: *Yeah? Or or it's more like, I think it's a tool for us to evaluate or reflect on our teaching.* [Amy - Interview]

Both Nic and Amy demonstrated an understanding of key concepts in translanguaging pedagogy by referencing relevant literature; however, when asked how they apply these concepts in practice, their intuitive beliefs about their linguistic abilities resurfaced. This entanglement suggests that both student-teachers are still in a liminal stage of development regarding translanguaging pedagogy. In contrast, Baaz showcases a different experience. In his interview, he describes his process of epistemological shift, moving from an initial 'counterintuitive' stance to embracing translanguaging pedagogy.

> BAAZ: *Some of the readings and some of the literature that has been included in this unit is a little bit counter intuitive, because that that [English only] ideology actually still remains quite strong in some areas of academia, in some areas of school even. But then there's this body of research that's developing and saying "No". A good teacher, actually, as part of our professional standards really is that we are able to teach to cultural and linguistic diversity.* [Baaz - Interview]

He explains how he entered his postgraduate teaching program expecting EAL/D learners in Australian classrooms to face similar struggles to the ones he had experienced in Western academia. However, he revised this intuitive belief after experiencing translanguaging pedagogy firsthand.

> BAAZ:*[This translanguaging unit] it's antithetical, because by the time I became a professional I [had] internalized the whole thing. And when in my university they said that English needs to be, you know, literacy needs to be taught… through curriculum. Everybody has to take part. And I said, No, that's not, that's not our job. Our job is not to, you know, do these things. We are economics, math teacher, second language speaker, right? And then, when I started reading the material…, the most powerful thing as a student, as a, as a person who experienced this thing throughout the life, the most powerful thing is the psychological environment… It seems inconsequential, but it's actually the most powerful, the ambience, the welcoming ambience.* [Baaz - Interview]

Baaz's experience of feeling welcomed as an EAL/D learner during this particular course was crucial to his understanding of teaching as an inclusive practice, emphasising the importance of Australian Professional Teaching Standard 1: *"Know your students and how they learn"* (AITSL, 2017). His comments reinforce the idea that individuals with significant lived experiences of a threshold concept are better equipped to fully unpack and understand it.

Theme 3: Practical knowledge: Transitioning from theory to practice

In the following data set, we examine how TE students are struggling to learn how to deliver lessons that accommodate their learners' diverse cultural and linguistic backgrounds while encouraging them to draw on their own cultural and linguistic resources. We have observed Amy's challenges in applying her theoretical understanding to practice in themes 1 and 2. Although she expresses confidence in her grasp of differentiated instruction and can discuss its components assuredly, she acknowledges that she still has *"a long way to go"* in applying this knowledge effectively.

> AMY: *I do have teaching experience and differentiated instruction is my specialty….listen, it´s like a whole area. How you give instruction on the language, the content…I think we sort of know the theory behind, but applying that into the teaching area, it's a long way to go.* [Amy - Interview]

Similarly, Nic can identify several pedagogical translanguaging techniques he has used in his lessons. However, he admits to having a minimal skill set for their practical application. He states, *"We did little things",* highlighting the challenges he faced in *"applying anything".*

> NIC:*… But I tried like I, I still did, like, we did little things like glossaries, and every conversation, especially with the seniors…I always emphasized it, bolded it, underlined it or something. But yeah, just trying to model it through them…just in terms of applying anything. It was just a bit, a bit hard.* [Nic - Interview]

The techniques he discusses all focus on helping students with language they may not know. However, when the interviewer shifts the conversation to how teachers can leverage learners' linguistic strengths, it becomes clear that Nic feels out of his depth.

> RES.: *quite a few of our students are coming with actually quite a wealth of, of linguistic knowledge ... then what we are trying to do is also to, to put forward culture as a, as a fund of knowledge.*

> NIC: *I understand that and ...I could just utilise things that would help students with different backgrounds..... It's, I guess it's hard to say...yeah, I don't know. It's, it's kind of two quite contradictory positions.... But you know it is a difficult one.* [Nic - Interview]

Nic's use of conditional language when discussing his teaching practice and his identification of two contradictory positions in relation to Funds of Knowledge suggest he still finds translanguaging pedagogy both conceptually troublesome and challenging to apply.

In our earlier discussions in themes 1 and 2, we noted that Baaz draws on his own experiences in western academia to inform his teaching, indicating that his understanding of translanguaging pedagogy is less troublesome than for Nic and Amy. We proposed that this demonstrates he has reached a reconfigurative stage of liminality regarding this threshold concept, at least concerning the types of troublesomeness identified by Meyer and Land (2003). However, this position becomes less clear when we examine his perspective through the lens of practical knowledge.

For example, in the following excerpts from his forum posts, Baaz describes how institutional factors impede his ability to implement translanguaging pedagogy. In the first instance, he cites the institutional structure and learning culture as obstacles to adopting a translanguaging approach:

> *The public university where I teach operates in an academic environment of monolingualism. For most of my international students with weaker English backgrounds, this poses significant hurdles in their learning journey.* [Baaz - Forum post]

Instead of implementing translanguaging strategies, Baaz explains that he prioritises creating an inclusive atmosphere in the classroom:

> *However, in my classes, I use my own EAL/D background to initiate the process of identity negotiation. As Cummins, Cohen, and Giampapa (2005)* [sic] *say, identity negotiation is a reciprocal process where I, as a teacher, open up identity options for my students, while also defining my own identities. This encourages my students to express themselves linguistically as well as culturally.* [Baaz - Forum post]

Baaz feels confident in creating inclusive spaces for expressing identity but is unsure about how to incorporate his students' multilingualism into their learning.

> *The curriculum and the daily learning routine leave very little room for me to adopt any form of translingual in my classes.* [Baaz - Forum post]

Although this capable student-teacher appears to be in a post-liminal position regarding his understanding of translanguaging, he seems uncertain about how to apply suitable strategies in his practice. This uncertainty is further demonstrated in his subsequent discussion posts, for example:

> *The strategy of having students write their first draft in their home language may pose some challenges. In a school such as Broken Hill High (where I did my first practicum), where there are very few students with EAL/D backgrounds, it would be very difficult to pair up students in groups where they can write and provide constructive feedback in their home languages. This might lower the opportunity for students with EAL backgrounds to create a multilingual ecology where they can share their knowledge and experiences.* [Baaz - Forum post]

Here he identifies the classroom microsystem as a barrier to implementing the strategy of drafting and discussing in the home language but does not suggest alternative strategies for his EAL/D students to "create a multilingual ecology where they can share their knowledge and experiences". This lack of proposed solutions indicates that while Baaz may have a solid theoretical understanding of the pedagogical approach, he still struggles to apply relevant strategies in practice.

The analysis reveals that pedagogical translanguaging remains troublesome for all three participants at a practical level. If we consider that effective practice reflecting its theoretical foundations serves as a threshold function leading to transformative understanding (Meyer & Land, 2006), we can conclude that Amy, Nic, and Baaz have yet to achieve this goal. Practical knowledge appears to be the most significant type of troublesomeness in understanding the threshold concept of translanguaging pedagogy for pre-service teachers.

Limitations of the study

This study represents a very small sample of TE students, all of whom are preparing to work in secondary education. Further research that includes students in primary and early childhood courses, and indeed in-service teachers, would provide a more comprehensive picture of their grasp of translanguaging pedagogy.

Conclusion and implications

This study represents a significant contribution to the field by being among the first to examine teacher education students' understandings of pedagogical translanguaging through the lens of troublesome knowledge. By adopting this framework, we are shifting the discussion from simply acknowledging the challenges that teacher education students face to a deeper understanding of the epistemological barriers that hinder their ability to implement translanguaging strategies confidently. Our findings provide new insights into how students experience and navigate these instructional practices, revealing specific sources of discomfort and confusion that have not been thoroughly addressed in existing literature.

As our data suggest, while a TE student's own lived experiences may play a significant role in driving shifts in understanding across the liminal spectrum, this is evident only in the domains of tacit knowledge and conceptual knowledge. Crucially, it appears that a significant lived experience does not necessarily provide sufficient insights into how to go about putting this conceptual knowledge into practice. In this regard, we need to acknowledge firstly that monolingual TE students may stand at a disadvantage to their plurilingual peers due their lack of lived experiences with learning through other languages and, secondly, that the ability to integrate appropriate translanguaging pedagogy into classroom practice does not appear to be contingent *only* upon one's own lingualism or language background. Without the skill to translate theoretical insights into actionable classroom strategies, both mono- and plurilingual TE students find it difficult to cultivate inclusive and effective learning environments.

The value of this analysis lies in its potential to inform teacher education programs of the challenges translanguaging presents and offer actionable recommendations for teacher preparation. Our findings suggest consideration should be given to the disadvantaged position of TE students who come from a monolingual background or who do not have significant lived experiences of translanguaging. Bringing student teachers' tacit understandings about the role of English and the role of learners' other home languages in the classroom to the forefront may provide a useful springboard in helping them to unearth and examine their own beliefs. Building first-hand experiences into the TE programme of the kinds of struggles EAL/D learners may have might also be a useful catalyst for shifts in understanding across the liminal space. In addition, universities must actively promote a supportive response by fostering student identity and actively dismantling deficit narratives surrounding multilingualism.

Our findings also emphasise the need for initiatives that not only equip TE students with the theoretical frameworks of translanguaging but also guide them through the practical complexities of integrating these approaches into their classrooms, with the possibility of extending the hours of practicum to allow students more hands-on experience with the support of a teacher mentor. This kind of dialogic discourse not only enriches student understanding but also equips them to adeptly navigate the complexities associated with cultural and linguistic diversity (Thomson & Michell, 2020). As discussion from D'warte (2021) and Barros et al. (2021) suggest, allowing pre-service teachers to witness real-world examples of expert teachers

proficient in translanguaging skills and plurilingual practices should form a cornerstone of teacher education.

In summary, this study not only underscores the substantial challenges faced by TE students but also advances the conversation by offering foundational insights that can guide transformative practices within teacher education. Future research should continue to build upon these findings, exploring further sources of troublesome knowledge for both pre-service and in-service teachers and further refining the support systems necessary for teachers to thrive in increasingly diverse classrooms. Aguirre-Muñoz and Pando (2021), Goodman and Tastanbek (2021), and Andrei et al. (2020) have all noted that reflective practice is vital for educators to articulate their instructional choices effectively, enhancing their understanding of how to incorporate translanguaging strategies into their teaching and teacher preparation must go beyond theoretical discourse and prioritise practical application in classroom settings. Moreover, as highlighted by Gorter and Arocena (2020), the effectiveness of translanguaging pedagogy is contingent upon the ecological systems of learning environments. Schools must systematically integrate translanguaging approaches into their existing curricula, aligning these strategies with broader commitments to promoting multilingualism. Our study compounds the idea that by embedding these principles within teacher training and ongoing professional development, we can nurture a new generation of educators who are prepared to embrace linguistic diversity, thereby transforming the landscape of teaching and learning in increasingly pluralistic educational environments.

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