

Pseudo-compliance or Convergence? Content teachers work together to learn about language.

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Abstract

This paper reports a professional learning (PL) project conducted over one year at a senior secondary school in New Zealand. Subject teachers volunteered to work with one another and a facilitator to identify the linguistic demands of their subjects, adapt teaching materials, and to try out teaching approaches congruent with research evidence about teaching emergent bilingual (EB) learners. This paper explores cases of subject-specific partnerships and how participants' responses to the PL appeared to impact their existing pedagogical content knowledge (PCK).

The PL sessions were facilitated through audio-recorded Zoom meetings. A thematic analysis was conducted and the findings were analysed using an adaptation of Davison's (2006) framework to map how participants engaged with the PL and collaborated with one another on new pedagogies. The study suggests that these teachers accommodated linguistic teaching approaches but their adaptation to language PCK may have remained at a compliant level.

Keywords

Teaching emergent bilingual students; teacher professional learning; pedagogical content knowledge; teacher collaboration; disciplinary linguistic knowledge.

Background

New Zealand, in common with many English-speaking countries, hosts international fee-paying students who wish to complete secondary or tertiary qualifications in the medium of English. This study was set in a secondary preparatory school attended by international students from non-English speaking backgrounds who were preparing for entry into a national university. The School

was staffed by secondary subject teachers who designed courses and moderated assessments in conjunction with academics in their field from the university. The primary objective of the school was to prepare their students for learning subject matter in the medium of English at tertiary level.

The teachers were experienced subject specialists with teaching qualifications. All the students were international English learners (EL) or emergent bilinguals (EB). The teachers were confident subject specialists, yet requested PL that would strengthen their skills in supporting the language development of their EB learners. In response, the senior leadership team invited the two researchers to design a professional learning (PL) programme and work with interested colleagues.

The facilitators worked collaboratively with teams of subject teachers to identify the linguistic demands of their discipline. They then cooperatively designed teaching materials and developed pedagogies that were appropriate for EB learners in their subject. In the last phase of the PL, teachers were invited to put these pedagogies and materials into practice and observe one another teaching in class. This paper reports how teachers in one faculty worked with their PL partner/s and responded to the content of the PL. It addresses the question of: **How did content teachers collaborate during this PL initiative to learn about language?**

Literature Review: Knowing How to Teach Language and Subject Matter.

This chapter reviews three different approaches to teaching subject content at the same time as a new language. It looks at the notion of pedagogical content knowledge in which language does not play an explicit role; dual content and language teaching approaches that attempt to promote both elements; and concludes with current approaches to teaching language through content.

Pedagogical Content Knowledge

Teachers' knowledge about what and how to teach is captured by the seminal term Pedagogical Content Knowledge (PCK). PCK conceptualises "the blending of content and pedagogy into an understanding of how particular topics ... are organised, represented and adapted to the diverse

interests and abilities of learners...” (Shulman, 1987, p.8). This concept resonates with many secondary teachers who tend to measure learning according to content and so language (outside vocabulary) does not play a significant role (Gleeson, 2015). However, as English assumes the role of a global language, EBs have become an increasingly visible presence in secondary school classes where English is the medium of instruction. Even so, the pedagogies and content knowledge of subject experts do not appear to have adapted to the diverse abilities of EB learners. Subject teachers may not

recognise how language uses function for different purposes in classroom interaction and for learning academic context, and instead may focus on teaching and correcting forms and conventions of language, and on specialised vocabulary development, particularly as these efforts relate to standard language and domain specific uses. (Faltis & Valdes, 2016, p.561)

Recently, educational linguists have begun to consider what PCK might look like for teachers of EBs, and how content teachers might expand their existing PCK to include knowledge about teaching language learners.

Dual Teaching Approaches

Various combinations of language and content classes have evolved since the 1990s. Originally this was designated Content-Based Language Teaching (CBLT) and represented a continuum of practices in schools from content-dominant classes in which language played a cursory part; to language dominant classes where subject matter was secondary (Lyster & Ballinger, 2011). More recently other versions of CBLT have arisen. Content and Language Integrated Learning (CLIL) and English Medium Instruction (EMI) are notable examples (Farrell, 2020). While there are minor conceptual differences, in essence these are approaches where subject teachers teach disciplinary content in the target language, paying more or less attention to disciplinary language forms or language pedagogies. Studies in these dual teaching approaches consistently identify that subject teachers may lack confidence and explicit skills to teach the language of a subject, and language teachers may

struggle with the subject matter. Studies repeatedly recommend further language-specific PL and note that subject teachers can be resistant to PL which appears to be outside their content area (Farrell, 2020; Gleeson, 2015).

Conceptions of Teaching Language and Content

Recent research offers specific guidelines for combining language and content instruction. For example, Love (2009), Bunch (2013) and Turkan et al. (2014) identify pedagogies that appear to benefit the learning of EBs in English medium schools. This ***Literacy Pedagogical Content Knowledge*** (LPCK) includes knowledge about how to structure spoken and written language for effective learning; recognise characteristic language forms and distinctive literacy practices; and design learning and teaching strategies (Love, 2009, p. 541). In Love's study, student teachers were explicitly taught these three language components.

In USA, Bunch (2013) identified fundamental understandings of language which he called ***Pedagogical Language knowledge*** (PLK) that could frame content teachers' understanding of language demands. He investigated a number of studies which appeared to operationalise this concept. These included teachers who used systemic functional linguistics to analyse linguistic features of subject texts, integrated genre-based pedagogies into their teaching, and used sociocultural approaches such as apprenticing EBs into academic practices.

Turkan, et al.'s (2014) idea of ***Disciplinary Linguistic Knowledge*** (DLK) is very similar, and this is the term this paper will use. DLK is defined as the explicit linguistic knowledge base that all teachers of ELLs need "to maximise ELL students' access to content understanding and participation in talking and writing the language of a particular discipline" (p.9). Teachers demonstrate DLK by identifying linguistic features appropriate to their subject area, and modelling these language features to their students.

Schleppegrell (2018) describes specific examples of teacher DLK. She suggests that teachers should be able to understand register variation to support students to interact with content in increasingly complex ways. Teachers should also understand the genres of their subject area, know how to talk with learners about how language works in subject text, and model these practices in speech and writing. Lastly, she recommends that teachers learn to use metalanguage (language to talk about language).

Consistent with these understandings of DLK, Kibler et al. (2015) suggested principles to guide subject teachers of EB learners. Firstly, second language acquisition should be conceived of as a social (therefore interactive) apprenticeship. Secondly, teaching activities should scaffold learners' academic development and help them grow increasingly autonomous. Thirdly, rather than simplifying teaching materials for emergent bilingual learners, teachers need to engage learners with complex and amplified texts.

In summary, research has found that subject teachers of emergent bilinguals need to understand the distinctive language forms and genres of their subject; how spoken and written language can be best structured for effective learning; and know how to design interactive learning and teaching strategies that support subject-specific literacies and practices. The objective of the PL in this study was to expand the teachers' Pedagogical Content Knowledge to include Disciplinary Linguistic Knowledge.

Methods

This paper reports findings from a small-scale PL project conducted over one year at an urban senior secondary school in New Zealand where international EBs were prepared for entry to a New Zealand university. The two facilitators and researchers (we) were invited to lead interested teachers in PL that examined how they might make subject area texts comprehensible to English learners. We requested permission to gather data during the PL process. Because the school was geographically distant from the facilitators, we decided to conduct the PL using Zoom and Skype. This was

consistent with our desire to position the participants as central to the PL so that there was scope for the PL to become self-sustaining, and it also aligned to the other PL initiative on using digital technology operating in the school at the same time. The study took place prior to the global pandemic, but the research design is transferable to fully online teaching environments.

The conceptions framing this PL were that PCK is “a form of teachers’ professional knowledge that is highly topic, person, and situation specific” (Van Driel & Berry, 2012, p.26) and that teachers respond differently even within the same discipline at the same school. For this reason, we designed the PL to “closely align to teachers’ professional practice, including opportunities to enact certain (innovative) instructional strategies and materials and to reflect, individually and collectively, on their experiences” (Van Driel & Berry, 2012, p.27). Throughout the PL, we were very careful to acknowledge the teachers’ subject expertise and positioned ourselves as facilitators and collaborators with a complementary (language) specialism. Since the participants had chosen to work with us, there was no evident power imbalance.

Research Design

This study examines the phenomenon of subject teacher collaboration with one another and a facilitator over a one year period of PL. It followed a nested interpretive qualitative case study design (Starman, 2013) in which clusters of collaborating subject teachers formed sub-units that contributed to an holistic understanding of the broader phenomenon. Audio-recordings of each PD session were transcribed and member-checked (Birt et al., 2016). These were the primary data source. In addition, the participants’ lesson plans and observation reports (on one another) and my PL plans were included as secondary sources for analysis.

Combining PL and research

We began by visiting the school in person to gain a feel for the research site, offer a taster session to give the teachers a sense of the PL, and introduce the research project to the staff.

We followed this visit with an online survey to gather descriptive data about the teachers' confidence and experiences teaching EB students. Sixteen of the 31 respondents had CELTA or DipTESOL qualifications. Many teachers had taught overseas, and about one third was bilingual. Of the teachers represented in this paper, two were bilingual and none had TESOL qualifications.

The survey included an invitation to participate in the PL and the research study, which included a reassurance that their consent to participate in the PL programme was not dependent on agreeing to participate in both the study. The two researchers each took responsibility for facilitating different subject areas, but stayed in close contact with each other. This paper reports on the economics/accounting cluster which began as a single sub-case and later split into three. I facilitated this cluster.

The economics/accounting cluster was quite large given that the sessions took place via Zoom and the teachers had to group around a single computer. It was apparent at the first meeting that five was an unwieldy number. For this reason, and to accommodate other aspects of the dynamics within the group, two teachers split off and formed a sub-group straight after the first session. These were one senior teacher of accounting (Maria) and her colleague, Anita, a teacher of accounting (these are pseudonyms for the teachers' real names). This left a trio, two of whom taught economics (Gary and Alise), and one accounting (Donna). This group met as a trio three times. As time passed, there was a sense that Donna would prefer to work with another accounting teacher and she recruited an accounting colleague, Mohan, and they met twice. This paper will report some of the experiences of all six teachers.

Economics/accounting cluster combined first session (five original participants)	
Maria (accounting) and Anita	Gary and Alise (economics) and Donna (accounting)
(economics)	session 1
session 1	session 2
session 2	session 3

session 3	Gary and Alise (economics)	Donna and Mohan (accounting)
session 4	session 1	session 1
session 5	session 2	session 2
session 6	session 3	

Table 1: *Groups and subgroups within the economics/accounting cluster.*

Data Gathering

We worked with teachers who taught in the same faculty because we aimed to raise these teachers' awareness of the linguistic demands of their subjects. We felt that this structure of working together with one researcher/facilitator would allow them to develop language - related pedagogies that were meaningful and contextualised within their subject. The PL for each subject area followed the same format, though this paper reports the economics/accounting group. The first session began with a shared Zoom session to engage the group with a research paper that used systemic functional linguistics to point out features of disciplinary language (Fang & Schleppegrell, 2010). Next the group was asked to apply this understanding of language demands to their teaching materials and their classroom practice. The last phase of the cycle was peer observation and the teachers reflected on this during the next Zoom session. Finally, my colleague and I conducted an evaluation of the PLD with one another's participants. It was intended for the PL to be iterative, and for the participants to lead future PL with non-participating colleagues.

Each of the group sessions was audio-recorded on Zoom. The connectivity at the school was not always stable so at times we struggled to complete sessions which was rather frustrating. All the audio-recordings were transcribed and shared with the participants for member-checking. I also gathered lesson plans and teaching materials that group members had co-designed.

Data analysis

The transcriptions and teaching artefacts were loaded into NVivo12 and coded to capture the teachers' developing DLK. My initial plan was to treat each teacher team as a case. However, Abell (2008) questions whether PCK is held at the individual or the group level (p.1409), and during the thematic analysis it became apparent that individual teachers engaged with one another and the PL process differently. Therefore this paper reports individual teachers' responses before reviewing themes across the group.

Trustworthiness

Credibility was assured through data triangulation as I gathered and coded data from different sources from multiple clusters of participants, and because these teachers had volunteered to participate. Participants were able to voice their interests and concerns throughout the regular monthly meetings and debriefings. Dependability and confirmability have been managed by describing the research methods in detail, triangulation and my own reflexivity in writing this paper. Transferability will come about when other researchers or subject teachers recognise similarities with their own teaching context (Shenton, 2004).

The findings section concludes with five themes relating to the teachers' collaboration with me, with the new material that was oriented towards the language of their subject, with one another, and with their students.

In the discussion, I modify Davison's (2006) *Levels of collaboration* as a theoretical framework to further analyse the individual teacher reports and these themes to answer the research question:

How did content teachers collaborate during this PL initiative to learn about language?

Findings

The section opens with a table that summarises the themes that emerged from these data and illustrates the teachers' engagement with language teaching and learning using indicative versus examples that illustrate opposing dimensions of each theme (Saldaña, 2013).

Theme	Example		Example
1. Using the language of language	"I think a lot of it went over my head." (Maria)	V	"They [the students] actually have more grammar than we do."
	"It's just extraordinary how educationalists can make the obvious incredibly complicated." (Gary)		E
2. Teaching language or teaching content?	"I honestly thought it was the English teacher's job." (Maria)	R	So it's better than just telling them. They had to do it (Anita)
	"I don't see that as what we would be doing in accounting." (Donna)	S	
3. Planning opportunities for students to talk	"Engagement doesn't necessarily happen in class." (Maria)	U	"[Talking]'s processing content." (Anita)
	"They're more and more <i>naturally</i> pushed to	S	"They cannot solve it unless they communicate and

	cooperate and work together.” (Alise)		share whatever ...they have got.” (Mohan)
4. Simplifying or amplifying?	“With complicated constructions they get lost.” (Alise)		“We can’t just keep on making it simpler and simpler and simpler.” (Donna)
	“We go over-the-top to make it nice and structured and easy to interpret.” (Gary)		“We have to build, we can’t just keep on making it simpler and simpler and simpler.” (Maria)
5. Teaching under pressure of time	“We ... don’t have time to devote... to these activities ... we have lots of curriculum to be covered.” (Alise)		“I don’t want ... to take up a lot of their time but I thought <i>oh great</i> , [a dictogloss] fits in.” (Maria)

Table 2: *The participants’ engagement with teaching language*

The versus examples of these themes offers a snapshot of the participants’ developing DLK at the time of the PL. Alise and Gary in particular struggled to recognise and value language-specific approaches to their teaching. Donna and Maria appeared to be in a state of transition. They recognised that their practice needed to change and were reflecting on how this might happen. Anita and Mohan appeared to be both open to and excited by their new learning. They were keen to modify their teaching and enthusiastic about the engagement of their students.

I now look more closely at how each teacher participated in the PL, and identify examples of their engagement with DLK.

Maria was a senior member of staff and an accounting teacher. She actively liaised with me to set up the PL sessions. Maria felt strongly that the students would benefit from their teachers' participation in the PL. After the first session involving all five teachers, she suggested that the group might function better if she removed herself from it because her seniority may have affected others' participation. Maria discussed this with Anita and they became PL partners even though Maria taught accounting and Anita was a teacher of economics.

Maria wanted to learn how to work better with EB students. It did not trouble her when she encountered new ideas:

I found [the article] very interesting but at the same time I think a lot of it went over my head... I didn't realise that there was a name (Maria)

Maria was open about what she didn't know. For example, she had always assumed that a whole class discussion was the best way to clarify any confusion

I go straight into the discussion aspect, I've not ever broken it down. (Maria)

Maria assumed that the English course would supply the EB students with the language they needed to study accounting

I honestly thought it was the English teacher's job and that when they came in to our class they would just pick up what's being explained. And now I realise that there's some aspects that I can actually use in class ...Like the cause and effect. (Maria)

She was not in the habit of pushing her students to negotiate their learning

I tend to give [the key points] to them because you know that engagement doesn't necessarily happen in class. (Maria)

She felt that she could support students more effectively by providing them with notes on the subject matter they needed

So I'm thinking, oh well maybe its best that I just give all that information to them and they take it in in their own time.

The accounting course-book had been written for the programme with the aim of summarising and condensing the content for the students. As the PL went on, Maria expressed doubts about whether the dense structure (including complex sentences) actually supported the learners:

I thought [the course-book] was already condensed down ... Yeah now I realise that ...I think it, they condensed it down but they didn't do it in a way that benefits [the students]... (Maria)

She concluded

I'm actually starting to think now we should spend time rewriting the textbook... I agree with you that we have to build, we can't just keep on making it simpler and simpler and simpler.

Anita and Maria seemed to feed off one another's enthusiasm. After observing a class where Maria implemented several interactive strategies including jigsaw reading, Anita summarised how their approach to scaffolding had changed.

*Well, it's a theory lesson - I've seen these lessons before, and the teacher just tells them and then they go and do exercises... They did exercises where they really had to come up with this by themselves, pull the information out of the notes and not just re-format it, but process it so that they could write it in a different way to the notes. So it's better than just telling them. They had to **do** it. (Anita)*

They were both struck with how the balance of classroom talk had shifted in favour of the students

She was prompting them, but they were doing the contribution... if we compressed everything together, Maria was probably only opening her mouth for maybe 10 minutes at the most. (Anita)

Maria was very interested in pedagogies that supported interaction. In particular, she worked with three level reading guides. While reporting how this lesson went, Maria observed how using their L1 supported her students' subject learning:

But yeah with one of the discussions I had, I asked them the question and they were having a debate amongst themselves in Mandarin. You could tell that ... they couldn't find the words at that time to say it ... I totally let them go with that and I said to them, okay I'll be back in a couple of minutes and I want you to explain to me [in English] what your answer is. (Maria)

Which Anita summed up as

[They were] talking Chinese mostly but that's their content, that's processing content. (Anita)

Anita was a part-time teacher of economics who had worked with Maria for a long time. Neither Maria's seniority nor the difference in their specialisms prevented them from forging what seemed like a harmonious learning partnership.

Anita quickly made sense of the concept of language demands. She was undeterred by her own limited metalanguage and realised that this was something familiar to her students:

Students, some of their English is better than ours because they are actively being taught grammar. You know, so they have grammar words. (Anita)

Anita saw that learning language involved more than subject-specific vocabulary.

I was sort of aware that the structure of the document makes a difference. (Anita)

Anita recognised that complex sentence structure and referent patterns can challenge EB students:

*I don't like the loopy sentences. You know embedded clauses... the thing I really didn't like was the pronouns: who was **he**? Who was **it**? What are we talking about now?. (Anita)*

She gave examples of metaphors and colloquialisms that might challenge EBs

So they've got this idea of "keeping your powder dry", "ammunition", those kinds of things going through. So the bank is "tipped": "tipped" is kind of a betting term you know. "Sitting tight", that doesn't make any sense if you don't speak English much (Anita)

After watching a DVD resource (Ministry of Education [MoE], 2007), she was intrigued by the idea that a subject teacher might also set language objectives

He's got an economics goal and a language goal and I really like that. ... I think it's a really good idea...And, if I was actually the teacher I ought to be, my students would be used to that because it would be happening all the time. (Anita)

Anita and Maria recognised the shortcomings of the materials and texts that had been developed in their subjects, and could see that the EB students needed to be supported-up. The workbook Anita used had been by the accounting moderator from the university who had his own ideas about disciplinary language:

... some things he thinks are too hard, other things he thinks are too easy. But one of the things he's always going on about, is the spelling and not being able to write a sentence, and how annoyed he is because he teaches a lot of them when they get [to university]. (Anita)

In the course of our discussion, Maria and Anita started to question their moderators' advice about accounting texts

It's not that we're making [the textbook] simpler and simpler and simpler, we started simply. That's what we do. But by the end... they have to go on and do it on their own. (Anita)

Although Anita described how she redesigned her lessons and materials in light of the PL, she did not have a chance to implement them in practice because she was working part-time at that time.

Alise was very keen to participate and some of her enthusiasm may have arisen from her experience as a language learner and former teacher of English as a foreign language. She taught economics and was used to working with Gary. Alise presented in the group as someone with prior

knowledge of how languages work. Even so, Alise was irritated by the metalanguage from the article:

It could be explained with more approachable language, there is too much linguistics technicality there for an ordinary person. (Alise)

I gently suggested some variations to her current teaching routines, but Alise had many reasons why these would not work in her class. For example, when I suggested that she might try a split information exercise so that more of her students could talk about new economics concepts, she responded:

I was thinking about that ... but ... we are under the pressure, we have lot of curriculum to be covered you know and although this is beneficial ... you can't do that every time you know, but ... where you find that benefit will outweigh the cost. But if you have to devote the whole lesson to get a limited benefit, it's a luxury. (Alise)

She worried that her EBs struggled to understand economics taught in English, and believed that it efficient to repeat important points:

They somehow lack the skill to put it down so I thought if I basically go three times over the same thing, at the end they will get the logic of it. (Alise)

Alise liked the idea of student collaboration and believed it happened naturally in her classes

So they're more and more naturally pushed to cooperate and work together I think, check each other's ideas or ask for help if needed. So it's not only me providing help you know, very often they could better understand the student that simplifies that.... (Alise)

Alise did not view group work as an intentional teaching strategy to promote classroom talk.

Gary, like his colleagues, volunteered to participate in the PL and the study. At the time, he was teaching economics at the school. In the first couple of sessions, Gary objected to the metalanguage from the article (Fang & Schleppegrell, 2010).

I read a lot in the economics realm and I read a lot of geography. I don't really read that much education literature and I'm just completely gobsmacked by the obscurity of some of the language. It's just extraordinary how educationalists can make the obvious incredibly complicated. (Gary)

He went on to explain that

it was interesting, I was in and out of Google looking at some dictionary items and ... words which I've never really come across- having been reasonably well-read- such as efface, agency and this whole word nominalisation... I don't know, it's interesting, it's just inaccessible language. (Gary)

Like the other participants, Gary used to believe that the key to supporting EBs was to simplify academic texts on the advice of subject experts, but he began to express some doubts.

We've been advised by moderators, exam writers, by peers, but also by senior management to make sure the language we use in the class and any assessments and learning materials is very accessible; so we go over-the-top to make it nice and structured and easy to interpret. (Gary)

When I pointed out the extensive use of modality and conditional structures in the textbook, Gary explained:

It was the recommended text by Cambridge International ... and then the examiner who came to this PD was the author of the book. So, on many fronts we said: "Oh we'd better use it!" which I regret really. (Gary)

Gary recognised that the syntax was likely to be a barrier to comprehension as he read aloud an extract from one of these textbooks:

"As with any other market, to understand why the exchange rate has changed or to help predict how it will change in the future, we need..." Yes it's horrible construction! (Gary)

Gary was also interested in group dynamics yet this seemed to be in relation to using digital technology.

Instead of looking at any of the websites I suggested (MoE, n.d.), he independently found a useful Irish website which explained the same strategies. Gary preferred to connect the role of graphic organisers to past content and digital PL, as opposed to what we had recently worked on together. Nonetheless, he was motivated to use graphic organisers that would achieve a focus on text structure:

I went hunting on Google and found this ... it just explains how to use different graphic organisers ... I found it a really nice summary of different types of charts...; the star charts, there's the fish bone thingy and all that sort of stuff that we've used over the last few years... and so I just blew up this and that we used that as a compare contrast.... (Gary)

So, it seemed that Gary was interested in trying different teaching approaches, provided he led his own learning, and could see how these approaches applied to economics. The end of the year approached and he and Alise did not find time to observe one another's classroom practice.

However, after four sessions, Gary sounded positive:

I'm sort of growing into it. Initially I found ... I guess the language side of things was a bit dominated by the metalanguage but no, in terms of the practical aspects of introducing some more of these tools in our team and learning, I think this would be very, very useful.

Gary appeared to be accommodating aspects of the PL into his practice.

Donna: In the first session, Donna set out her reasons for taking part in the PL. She was concerned that the textbook had been simplified too much:

The point I was making about accounting is that: well... we are using very basic materials that we have written ourselves and I have always wondered if we can try and up the language a little bit... That's one of the reasons why I'm here. (Donna)

As the only accounting teacher working with colleagues who mainly taught economics, she exerted her professional identity to ensure that she and her subject were not subsumed into economics PCK.

When I asked if she had accessed a DVD (MoE, 2007) she replied:

I did, but as usual, I find the whole website [TKI] extremely annoying ... because they are only economics videos there's never anything for accounting... (Donna)

Donna was not convinced that activities or theories from educational linguistics had anything to contribute to her professional learning and preferred to practise a strategy she had heard about at a subject-specific conference rather than trying an anticipatory guide as I suggested.

I decided to go back to the activities that I was given at the Blackboard Conference last year, when I went to ... an accounting lecture ..., because the other thing that Alise talked about was, yeah, I don't see that as what we would be doing in accounting. (Donna)

Donna explained that as a literate and well-educated person, she already understood the language competencies that her students lacked, and she identified these as reading and writing skills. She also believed that she was well-positioned to support these skills in accounting:

In accounting, because we have never found a textbook that they can cope with, because the subject is totally new to them, we write our own material and since I've been a faculty coordinator, when I've been writing the final exams, I've tried to put a little bit more reading in each time. Sneak it through and talking to the others about how we can improve their reading and writing. (Donna)

She worried about the lack of appropriate textbooks for her students and worked to make texts accessible,

We've diluted our notes right down. We don't have time in class to spend a lot of time reading, we really don't. This is the problem... because we want to improve their language skills... (Donna)

Her primary concern was preparing her students for the demands of university study, and this seemed to require them to use correct accounting terms

It's a problem ... trying to develop their language skills but at the same time making sure they still get the marks because they will lose marks if they use the wrong word even if it means the same thing. (Donna)

Generally, Donna did not judge DLK could contribute to accounting students' learning.

[In] some of the classes like summarising and the revision, we're doing the ledger so it's totally practical, there's no language and all of that. They're reading short sentences but not reading paragraphs and its understanding which column to use; that to me is not a language thing. (Donna)

The group divided for the last time when Donna brought in a new colleague who had joined the accounting team. This appeared to address her concern that her economics colleagues' ideas would not work in her subject:

What I've seen won't help me. I need to see an example in accounting. (Donna)

We moved towards a focus on teaching strategies but at first Donna did not see the point of engineering group activities, and wondered whether they were worth precious time:

We don't often have time to do it in class. So it's sometimes on their own. If I get them to do it in class, yeah they just naturally do it together. I don't force them to do it together ... I suggest, "Help each other". (Donna)

However, in discussion with Mohan, designed-in group activities seemed to make more sense

So we have to work out a way of making them do it [together]. (Donna)

Her colleague identified a place for a split information activity in the current unit of work, though he was clearly applying what he had learnt about learning styles

So I think just for depreciation, one of the possibilities could be activity - not a physical activity where they are kind of using their kinetic skills more... we could give, just like the crossword, some parts of the trial balances to someone, and the other adjustments to other one, and then ask them to interact and see, and do the - (Mohan)

Like a jigsaw puzzle. (Donna)

Following this conversation, the pair observed one another and returned to the PL session with more enthusiasm.

Mohan: was very keen to try new things and refine what he was learning. While Donna resisted trying an anticipatory guide or jigsaw activity and preferred to refine a favourite crossword activity, Mohan was excited at the thought of planning opportunities for his students to talk. Mohan could see that a jigsaw reading activity had potential:

They have to talk to each other, because one person will have one part of the puzzle - the other one will have the other part of the puzzle, and then they cannot solve it unless they communicate and share whatever piece of information that they have got. (Mohan)

Mohan's positive attitude appeared to rub off on Donna. His first efforts at creating a jigsaw activity were not successful but, after discussing this with us, he was keen to try again but at a different phase of the unit and with the addition of a retrieval chart:

I'm going to try this in the ... middle of the topic, and I'll create a template this time... Then I'll make them leave their material behind, and just take the template to the expert group. (Mohan)

At the end of our discussion, Donna also expressed interest in trying this activity but on her own terms

So, in accounting I would have to explain how I want them to take the notes first. Does that make sense? Yeah, and I would give them a template to help them, I think. (Donna)

In the next chapter, I use the themes to explore elements of collaboration with support from literature.

Discussion and implications

The six participating teachers collaborated on two levels: with the new language-oriented PL material (and the facilitator), and with one another. This section explores aspects of collaboration visible in this PL using four of Davison's (2006) five descriptors (Appendix). I examine first the participants' *attitudes towards the PL and integration of PL*, and their *efforts to engage with each other and the facilitator*.

Attitudes Towards the PL and Integration of PL Going Forward

The teachers were acutely aware that they had a limited amount of time to prepare their learners for studying at university. They worked hard to bridge this academic gap.

1. Using the Language of Language.

Researchers agree that content teachers need metalanguage in order to talk about language with language learners (Fang & Schleppegrell, 2010; Schleppegrell, 2018; Turkan et al., 2014). While the participating teachers were aware that it was important to master technical vocabulary in economics and accounting, they appeared to feel that it was showing off to use language-specific terms. Only one of the clusters saw the point of this. This passive (and at times, active) resistance to metalanguage seemed to be a wasted opportunity especially given their students' experiences in learning grammar in their own country and in AEP classes in New Zealand.

2. Teaching Language or Teaching Content?

This PL was intended to raise the participants' awareness that learning their subject matter simultaneously involved learning language and learning through language, and the two are intertwined. Mohan, Anita and Maria adapted their practice in ways that appeared convergent. They recognised that learners needed opportunities to "do" their subject, by using disciplinary language with one another to solve authentic disciplinary problems (Love, 2009; Schleppegrell, 2018). There seemed to be a continuum of teachers' responses as, even at the end of the PL, Alise and Gary considered a focus on language to be an add-on, and privileged "access to disciplinary content over opportunities for language development" (Molle, 2020, p.1) thus demonstrating pseudo-compliance with the PL. Anita, however, tried creating language as well as content objectives which suggests co-option of PLK.

3. Planning Opportunities for Students to Talk.

Research conducted with a socio-cultural interpretation of how language is learned, consistently recommends that students have the chance to talk their learning (Bunch, 2013; Kibler, et al, 2015; Love, 2009). During the PL, we explored how interactive pedagogies such as graphical organisers, information gaps or barrier exercises, dictoglosses, jigsaw reading or cloze exercises would work in their subject. Gary, Alise and Donna resisted these new strategies and preferred to stay with familiar teaching approaches such as crossword puzzles that students could complete independently, or whole class discussions. They still felt that allowing students to chat generally on a topic was enough—suggesting that they had not understood the role of interaction in learning through a new language. I sensed that these participants remained at the pseudo-compliant and compliant end of the continuum, and would revert to their normal practices as soon as the PL finished. Alise used a cost-benefit analogy to explain that there were insufficient learning benefits to justify investment in class time. Nonetheless, the other teachers seemed to embrace the new ideas and reported back how they had introduced interactive tasks and how they would modify these activities in future. In co-opting these language-informed practices, they demonstrated at least accommodation, and, for some, convergence.

4. Simplifying or Amplifying?

These teachers faced a dilemma when choosing the instructional texts for their EB learners: Should they simplify the subject matter or support their learners to read it? They worried that unless the texts were condensed and/or simplified, they would not get through the curriculum and their learners would not make sense of the subject matter. Research suggests that learners should enjoy both high challenge and high support (Hammond, 2006), to interact with one another, and amplified texts in order to make meaning. Furthermore, “English language learners should have opportunities to engage with authentic texts that represent various elements of complexity rather than having access only to simple or simplified texts” (Kibler, et al., 2015, pp.25-26).

The participants all recognised shortcomings in the existing texts written either by an outside expert in economics, or by the teachers themselves in an attempt to simplify the subject matter to a comprehensible level. Anita supplemented the textbook with an authentic article on economics from the newspaper but on close examination found that this was written in a mixed “chatty” genre, riddled with metaphors and colloquialisms which she believed would confound EB learners. We worked together to write supporting-up versions of these texts. Many of the teachers were very keen to rewrite more of their teaching materials going forward. Their willingness to initiate this, and to co-opt ideas from educational linguistics, suggests a level of convergence. Generally however, while accommodating during the PL, these teachers did not wish to invest the extra time and effort and preferred to stay with the advice given by subject experts, despite its shortcomings for EBs.

Their Efforts to Engage With Each Other

The PL was designed so that teachers could work with colleagues from the same discipline in the hope that this would legitimise their participation (Gleeson, 2015; Kibler et al., 2015) and support new learning. The outcomes differed from our expectations. Limitations of the technology affected the group size and we soon discovered that five was too large a group for PL by Zoom. We also learnt that even though it is theoretically sound to work with colleagues who share a discipline, other factors may come into play in practice. Schools are hierarchical and so certain members preferred not to work together despite sharing a discipline. The participants who got on well together worked productively across disciplines; yet other teachers who did not click in the same way resisted each other’s disciplinary knowledge and suggestions. One cross-disciplinary pair (Maria and Anita) consistently worked together at the convergence level- giving and taking feedback from each other in good heart. Gary and Alise were used to planning and working together and carried this relationship on to comply with the PL- though they did not find time to observe one another. It was apparent that once the PL ceased, they would revert completely back to their congenial and subject-dominant norm. Donna and Mohan seemed happy to be working within their discipline. Donna originally appeared to passively resist cooperating with either the intentions of the PL or her

economics colleagues. Once she recruited an accounting colleague, they worked positively together. They observed and fed-back on one another's lessons convergently. However, they differed markedly in how they integrated the new learning. Donna seemed likely to return to familiar texts and pedagogies, whereas Mohan seemed energised by the new learning and might continue these practices because he could see that they worked.

As facilitator, I felt like the ambassador for DLK. I tried to be meticulous in acknowledging the teachers' expertise before suggesting modifications that would enhance language learning. My efforts to situate language teaching approaches within their subject matter suggests convergence. Several of the participants seemed convinced that it was worthwhile to modify their teaching materials to take account of subject specific structures such as modality and cause and effect structures (Love, 2009; Schleppegrell, 2018). They also appreciated that it might enhance their students' understanding to scaffold their learning through classroom interaction. Nonetheless, I am not sure how deeply these changes were embedded and there is a chance that those who embraced pedagogies that enhanced interaction (like the jigsaw activity) did so because they could see that students were engaged in learning subject matter rather than from a deep understanding of educational linguistics. Others (Gary and Donna) liked a particular activity but claimed it as a *content* pedagogy. This may not have been an important distinction because the extra exposure to the language of the subject, and the extra opportunities for rehearsal and negotiation would have benefited the EB students regardless. In contrast, several teachers (Alise and Gary) appeared to hold fundamental beliefs that language pedagogies were at such variance to their PCK that substantive changes were a step too far. These participants politely resisted more than superficial adaptations to their practice, claiming time as an excuse.

Limitations

The PL was designed to enable teacher teams from the same or a similar discipline (Molle, 2020).

Even so, one participant worked with three different groups of colleagues. I believe that had she had

more time to work with a subject specialist colleague, she would have continued her trajectory towards convergence. The teachers participated willingly with me, and it may be those who were a little reluctant to work with one another may have felt motivated to experiment more with their classroom practice if I had observed them teaching. Nonetheless, we believed that being responsible to one another increased the likelihood of sustained change (Farrell, 2018). The PL lasted one year but the school schedule and staffing changed and so we do not know whether the participants continued to experiment with language pedagogies.

Conclusion

How did these content teachers collaborate to learn about language? This PL appeared to achieve some movement in participants' understanding of disciplinary language knowledge. The participants engaged with aspects of language knowledge and applied them to problems of practice- the learning of emergent bilinguals in their classes. At the time of the PL, all the teachers co-opted and integrated pedagogical aspects of language teaching into their content classes. However, even after a year, DLK was still at an emergent stage and would need consolidation if DLK is to transform their practice.

There were identifiable influences on the participants' commitment to learning about language. Discussing research literature was not a success in this PL as the metalanguage daunted the participants rather than inspiring confidence as a teaching tool. Peer observation made a difference as the participants who made time to observe one another developed a practical understanding of how language-oriented pedagogy supported content learning. However, positive professional relationships among participants played the most obvious part in their PL engagement.

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Appendix

Level	Distinguishing Characteristics (attitude; effort; take-up; expectations of support)
1. Pseudocompliance or passive resistance	<ul style="list-style-type: none"> • An implicit or explicit rejection of collaboration and preference for status quo (generally after a short ‘attempt’); • little or no real investment of time or understanding by teacher; • no positive outcomes (may have been counter-productive, i.e. entrench existing negative attitudes); • expectation is that ‘this too will pass.’
2. Compliance	<ul style="list-style-type: none"> • A positive attitude and expressions of ‘good intent’; • efforts made to implement new learning but with limited understanding of implications, • informing documents seen as external and/or imposed, • teachers feel defensive and besieged by conflicting demands; • ‘achievements’ conceptualised as nonintrusive and very concrete (e.g. development of worksheets, minor adaptation of texts); • expectation of high degree of practical and teacher-specific external professional learning
3. Accommodation	<ul style="list-style-type: none"> • A positive attitude and willingness to experiment; • efforts made to accommodate PL but uncertainties seen as unnecessary and avoidable; • only limited understanding of theoretical base of educational linguistics and little critical examination; • achievements conceptualised mainly as strategies and techniques;

