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How prepared are content teachers in Australia for teaching new curricula which demand the integration of language and content?

What do content teachers in Australia know about language? Despite years of PD and the development of a language-specific Australian curriculum, this qualitative study of 11 secondary teachers suggests that subject teachers have gained only a superficial understanding of the language knowledge necessary for teaching EAL students. Their perspectives and experiences of what makes good teaching have equipped subject teachers with a repertoire of strategies that they feel are sufficient to meet these students' needs. However, literature suggests that there are specific ways to promote language and content learning such as developing core TESSOL modules in preservice education followed by sustained professional development sessions, as well as collaboration with ESL teachers and other experts. These approaches may give subject teachers confidence to integrate a language focus within their content outcomes, and implement purposeful instructional techniques that promote language learning. Teachers may then view the Australian curriculum as a resource.

1. Introduction

The first national Australian school curriculum (AC) was launched in 2012. This was a groundbreaking step in mainstream curriculum development as the AC systematically articulated the content of different learning areas as well as the language used to convey it. The AC formally illustrated the inextricable link between language and learning.

The impetus for the AC and its focus on subject-specific language arose not from the body of research on systemic functional linguistics (SFL) in Australia, but from the more practical demands of economics and industry. Science education is one example of a field that is growing in importance in the 21st century as more careers require scientific skillsets, and it is expected that global problems will be solved by scientific means. In the USA, industry continues to demand a greater focus on STEM subjects (science, technology, engineering, maths). The education sector responded in 2012-2013 with the introduction of new national Next Generation Science Standards (<http://www.nextgenscience.org/get-to-know>). These have turned the spotlight onto the most effective ways to teach scientific content, and have led to increased attention on

integrating language instruction with content knowledge (Short, Vogt & Echevarria, 2008; Turkan, De Oliveira, Lee, & Phelps, 2014).

Australian education faces similar pressures from industry to the US, and must also meet the needs of a linguistically diverse student population. In 2016, 21% of Australians spoke a language other than English at home (<http://profile.id.com.au/australia/language>), and this proportion of the total population was significantly higher in state capital cities, such as Sydney where 25.2% people reported speaking a language other than English (LOTE) at home. In short, the Australian school population includes increasing numbers of linguistically diverse students at a time when there is an expectation for graduates to engage in STEM related occupations.

Articulating scientific knowledge is therefore a critical task, yet even in science education, learning about the language of science continues to be a major challenge for students and their teachers (De Oliveira, & Lan, 2014; Fang, 2005; Wellington & Osborne, 2001). Despite this ongoing challenge, preservice preparation for science teachers typically focuses on conceptual knowledge of the subject, leaving little time for the academic language of science. When practising teachers receive professional development, it is more often geared to new standards or curricula than to the language of science. Even science teachers with an understanding of the language rarely have a metalinguistic awareness—an ability “to extract themselves from the normal use of language and focus their attention on the functions and forms of the language” (Masny, 1997, p.106).

The new Australian Curriculum for Science (<http://www.australiancurriculum.edu.au/science/general-capabilities>) is explicit about the subject-specific nature of the literacy requirements, and supporting documents now offer models of language for teachers. The other learning areas in the AC also specify the text types and language forms required to read and write within a content area. However, further support is necessary in preparing teachers to teach students how language is used in specific subject areas (Lee & Buxton, 2013; Lemke, 1990). Despite the AC, preservice and in-service education for Australian teachers continues to foreground subject content and little attention is paid to the language conveying the subject matter.

In Australia all initial teacher education programs are required to address the needs of students learning in and through English as a second language or dialect (EAL/D) as a national priority

area, including “effective teaching and learning strategies for teaching second language learners in the context of the mainstream classroom and the range of key learning areas” (New South Wales (NSW) Board of Studies, Teaching and Educational Standards (BOSTES), 2014). However, research into the complex language and literacy challenges faced by EAL/D learners suggests that even in such contexts many mainstream secondary school teachers feel inadequately prepared to meet their needs (Reeves, 2006).

2. Literature review

Teachers need Knowledge About Language (KAL) to teach language and content. In the 1980s Australia was one of the first countries in which significant critiques of the notion of language as communicative competence and the subsequent separation of language and content gained widespread acceptance, leading to significant changes to curricula (Davison, 1990; Lo Bianco, 1990). Halliday’s (1978) view that the uses of language are inseparable from its social functions, with language defined in terms of its meaning potential, as a set of linguistic choices to be made, explicitly challenged the separation of language and content. Educational linguists working within a Hallidayan linguistic perspective (Halliday, 1993; Martin & Rose, 2008) identified the critical role of language in the knowledge building of school disciplinary content (Christie & Derewianka, 2008; Martin, 2013; Unsworth, 1999). This internationally recognized body of research has informed a number of studies (Love & Humphrey, 2012; Morgan et al., 2014; Schleppegrell, 2013; Veel, 1997, 2006) which have found that teachers’ enhanced knowledge of key meaning-making systems result in enhanced student understandings of academic concepts.

Researchers now advocate the inclusion of “Knowledge About Language” (KAL) in teacher education (Bunch, 2013; Hammond & Jones, 2012; Love, 2010). Content teachers and their professional developers are urged to see relevance of KAL for each particular subject and understand language as a meaning making tool. However, in practice, the literature suggests the language focus in content areas is still limited to subject vocabulary (Gleeson, 2015; Phillips & Norris, 2009).

It appears that a basic knowledge of the genres and their key linguistic features is needed to build teachers' capacity to: identify and explain the increasingly technical and abstract discourse across the years of schooling, make discipline knowledge visible and accessible to their students, describe the cumulative building of knowledge across the school years in ways that contribute to effective pedagogy, and build understandings of the interaction of language and other meaning-making systems in the representation of knowledge. One strategy to do so may be with the tools offered by systemic functional linguistics (SFL) (Christie & Derewianka 2008; Gibbons, 2008; Halliday, 1993; Rose & Martin, 2012; Seah, Clarke, & Hart, 2011).

This study asked the question: What do content teachers in Australia know about language?

3. Method

This paper compares findings from a study conducted with secondary subject teachers in 2012 in two large urban schools in Sydney, NSW. The timing of the study was significant in that this was the year when NSW was preparing to enact the ACARA Australian curriculum. The two schools were purposively selected for their large NESB student population, their engagement with ESL interventions and their proximity to an Intensive English Centre (IEC). Eleven teachers volunteered from subject areas including history, ICT, geography, mathematics, science, visual arts, English, learning support and ESL. The teachers of ESL and learning support commonly team-taught in additional subject areas such as science, mathematics geography and music, or integrated studies (Focus on Reading). One participant was the head of the IEC with responsibility for preparing new arrivals for entry to secondary school. The teachers had teaching experience that varied from less than two years' to more than 20 years' experience. Some had middle or senior management positions and two held responsibility for the placement and progress of EALs in their large urban secondary schools. They chose to participate in the study after senior managers at their schools shared details about the research objectives.

Pseudonym	Gender	Years of teaching experience	Teaching area	TESSOL Qualifications	PD
David	Male	7	Head of Learning Support	Dip Ed (ESL major)	-

Rosa	Female	2	Learning Support	-	Grammar and teaching
Marie	Female	1st year	Science	-	
Charlene	Female	25	Head of Learning Support/English	-	Teaching English Language Learners (TELL), ESL conferences
Nell	Female	10	Learning Support	-	ESL in the mainstream
Shona	Female	21	Visual art	-	-
Mike	Male	19	History Society and Culture	Dip TESOL	
Beth	Female	20	Intensive English Centre	Dip Ed (ESL)	“Ongoing and continuous”
Neil	Male	35	Indonesian, ESL	Dip Ed (TEFL)	
Karl	Male	22	Maths	-	Inservice PD
Nadia	Female	20	Focus on Reading	-	-

The participants completed a short questionnaire that prompted them to think about language teaching and learning in their disciplines. The questionnaire items were used as prompts for individual semi-structured interviews that took place at the school. Interview data were transcribed and analysed thematically. This paper reports the views of these teachers about teaching language in their content areas.

4. Findings

The teachers’ reported beliefs about teaching EALs fell inside two overarching themes: *Language teaching is included in good teaching* and *Language teaching is included in literacy teaching*. Their views about language and language learning fell into one or both of these

categories.

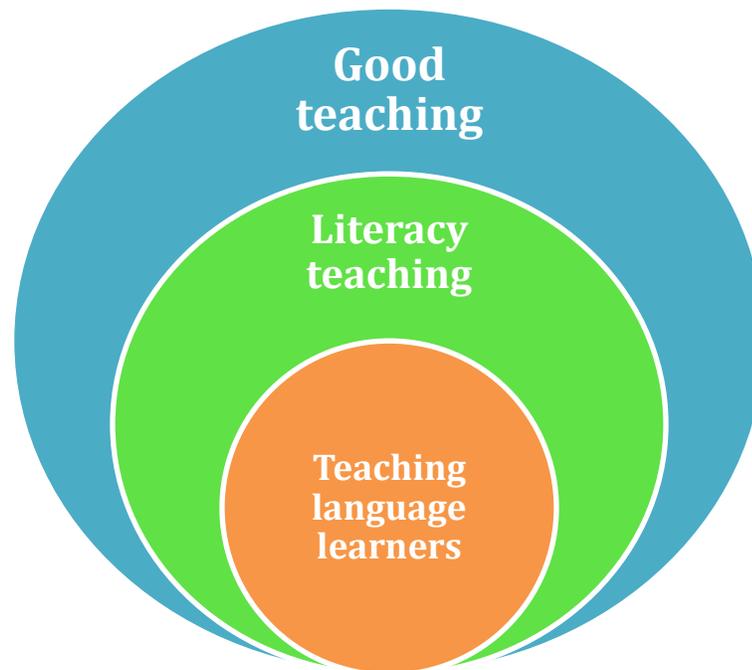


Figure 1: Teachers' conceptions of knowledge for teaching language

Theme one: Language teaching is included in good teaching

The participants believed that there was no specialist knowledge required to be effective teachers of EALs. They reported a number of teaching practices that were consonant with research about accelerating the learning of EALs, and good teaching in general. For instance, all of the participants were conscious of the importance of connecting with *students' interests and prior learning*. Nell constructed social studies lessons around episodes of Bear Grylls; Rick drew on his students' cultural knowledge and religious convictions in his history classes and Karl captured his students' interest in mathematics by focusing lessons on money and cars.

Shona felt that *sharing learning objectives and setting success criteria* empowered students to play an active role in their learning (though she felt that language learning objectives would be a step too far). This learning process was dependent on providing timely *feedback*:

Explicit feedback is critical to the students to improve them, their results, and improving their writing. ... a huge part of ESL students' progression in the English language with writing and with reading,

but for writing it's feedback....we get English students to work over the answer, to look at the standard, look at the rubric, interpret and assess themselves ... And it all demands good feedback for the students. (Salma, Head Teacher Learning Support)

According to several participants, learning for EAL students, as for every student, should begin with *rich tasks* that allow for concepts to be represented in different ways using different media.

We'll cover the content, then we'll watch a video that relates to that, then we'll discuss it (Marie, Science)

ICT was considered to be highly motivating and for this reason believed to be effective in promoting language learning. Interactive whiteboards and engaging software packages (Edmodo, Testmaster, Prezzie) were tools recommended by Shona (Visual Arts). Experiential learning and learning that included visual aids were favourite techniques for teaching EALs:

I think providing lots of visuals is important... I think lots of language development [strategies] like barrier games and stuff (Nell, Special Needs).

There was consensus that *modelling* would benefit EAL students and the teachers went about this in different ways. A popular approach was deconstructing past examination papers to familiarise students with the expectations for HSC.

I write a model. But they should see a lot of models because there's such a reliance on past papers here, so even if we give them past papers, they're always with solutions as well. So they have models there to look at too for those kinds of questions. (Karl, Mathematics)

One subject teacher who had ESL qualifications was very specific about modelling subject specific writing:

If you want them to do an essay, you've got to show them how an essay works. You've got to put it up on the board, you know: This is what you need to include in introduction... you need this thesis statement that's got to explain all the different aspects of where the essay is going. And you've got to have a topic sentence in each of the paragraphs. (Rick, History)

This approach was supported and clearly explained by a senior teacher at his school:

In history there is the discussion text type... expositions are huge in respect of what students do in an examination or in an assessment. What we do to scaffold them is we absolutely explicitly show the students what the text type looks like and provide them with examples of what this text type looks like. We provide them a range of examples as well. What I also do is ... deconstruct, so once you've shown them what the whole text type looks like and we have looked at the structure, the form and features, of what constitutes this text type, what it's all about. We pull it

apart and deconstruct it. On the opposite side of that we also construct one. (Salma, Head Teacher Learning Support)

These were the only teachers who specified the role of genres and text purposes in developing academic language.

There was a strong sense that *oral language* was important for engaging EAL learners, especially for those from families who were illiterate in their L1, though they did not articulate why it supported language learning. One teacher described how she made a bridge between colloquial and written-like language

I'll put it into a simple, sort of common term as I can. Then, in brackets next to the simple word, I'd put the more scientific term. (Marie, Science)

Other teachers agreed that talk would lead to learning:

They've got to be able to talk because if they can't talk, they're not understanding it properly. (Rick, History)

The ESL teachers shared that structured interactive tasks such as jigsaw reading would enhance *language* learning, but shied away from group tasks because they could be difficult to manage with lively classes. Most subject teachers preferred talk to occur in whole class discussions, which suggests that their reason for discussion was managerial rather than to promote language learning. They explained that students were likely to go off-task in small group activities but they could monitor learning in whole class tasks.

The teachers had mixed opinions about students speaking in their L1. Some felt that it would inhibit learning the L2 (English) but many believed that the L1 enabled EAL students to engage in higher levels of thinking.

There's a limit [to the information] that I get across to them but they can talk about it and that way I can find out actually if they know the idea, understand the idea in their own language (Karl, Mathematics)

The rationale was that

Your second language can never be better than your first and so I think they need to keep pushing on with their first language. (Neil, ESL)

One senior teacher also felt that the L1 was a means to create positive links with the families.

It's very important to allow students in ESL to be able to use vocabulary concepts in their own language. And so a technique that I have used all the time is... I ask students to then spend a little bit [of time] at home on what that word translates to in their own language. (Salma, Head Teacher Learning Support)

This theme illustrates that teachers favoured a number of approaches to teaching and learning and teaching strategies that have been found to promote language learning. But, it did not appear that these positive conceptions of EALs' learning were underpinned by a strong foundational knowledge about language, and may instead have been informed by their professional experiences.

Theme two: Language teaching is included in literacy teaching

All of the subject teachers in the study felt confident that they understood how to teach EALs because their schools had such a high proportion of EALs and they were used to teaching these learners. The participants' remarks suggested that they believed that EAL students were on a similar learning trajectory to students who struggled to acquire literacy in their dominant language (L1); or that

Language teaching is much the same as teaching literacy

I look at the ESL stuff, and I did that 11 week *ESL in the Mainstream* course,... and lots of them were just literacy strategies and I don't know if this sounds naïve but they look a lot like what we use in English, you know: scaffolding and background knowledge (Nell, Special Needs)

They were a little wary of the metalanguage of ESL:

We learnt about, and we use relevant texts and stuff like that. I remember that from ESL but I don't know about all the first phase development ... And you know how ESL people use that talk. (Nell, Special Needs)

This teacher struggled to distinguish between the literacy and language learning:

ESL is more about communication and function in the society... literacy is more focussed within an environment like school where there's a lot of writing, there's a lot of reading and things like that. (Rosa, Learning Support)

There seemed to be an assumption that teaching English as a second language (ESL) differed from academic literacy in that the purpose of ESL was to develop functional language

It's all about transitioning them into the work place. (Marlene, Head of Teaching and Learning)

The teachers seemed familiar with literacy strategies designed for learners in low stream classes and tried to apply these across the curriculum;

The challenge to me are the other kids who can't write well. So we've looked at some literacy stuff for them... there's all sorts of plans but to take it down to the level to some of these kids, it's a lot of visuals (Nell, Special Needs)

Although the focus of the interviews was specifically on (second) language learning, another teacher summed up the faculty-wide confidence and sense of expertise for teaching EALs:

in visual arts we are literacy queens (Shona, Visual Arts)

Several teachers felt that:

Teaching EALs was similar to teaching at primary school level.

One worried that her language teaching skills might be limited because she was “not primary trained”. However, she worked to apply what she had learnt from colleagues through her school's partnership with a primary school:

I went across to a class in primary school and they used like lots of different strategies like predicting, you know, with text...and there is another strategy where you get them to draw what they think might be in the text ...we know the word metacognition and I always put it on a board! ... I try not to talk too much... But to show them those strategies, and they benefit learners of all abilities. (Nell, Special Needs)

The literacy approaches promoted through partnerships with the local primary school were seen to promote language development, but some participants were unaware that literacy practices and assessments designed for children learning in their first language (L1) may not be appropriate for EAL learners in a cognitively demanding secondary context:

It's been so informative seeing what the primary school's doing, because we have a lot of students that fall into primary age reading groups. (Shona, Visual arts)

While the belief that learning an L1 and L2 was much the same was inferred by many of the participants, it was evident that at least one other participant appreciated the different cognitive and generic demands faced by secondary school EAL learners. One reflected on a grammar course she was taking:

[On this course] there's a bit more of a focus towards the primary school setting and things like recounts and retellings and stories and things about the kids' personal kind of lives. I mean that can be transferred into high school settings... But, to me high school is not just about that, you've got content to teach as well. (Rosa, Learning Support)

Many of the teachers felt that the best way to promote an EAL's literacy and thus language proficiency was to focus on *decontextualized grammatical structures*:

They actually need some time in a small group just to focus on like the mechanics of language. (Simon, Head of Teaching and Learning)

and mastery of phonics

Our teacher aides work basically through the multi-lit programme which focuses on things like sight word recognition and blending sounds at the decoding level. (Simon, Head of Teaching and Learning)

Non-native-like pronunciation was believed to indicate limited proficiency in English

Every time I am talking about a student who is shy or, or a student who may not be able to pronounce things I'm always thinking of ESL learners. (Shona, Visual Arts)

And incorrect spelling was taken as a strong indicator that an EAL student had limited comprehension

We concentrate on the word level because based on the assessment tasks I've done, I find that they don't know how to spell properly which is why we focus on getting them to spell. (Marie, Science)

It was generally agreed that EAL students learn language best starting at the word level

Their language levels are very very low, so it's simple plurals, it's simple past tenses, it's simple construction (Rick, History)

The word level included a focus on pre-teaching technical vocabulary:

Because the subject has a terminology that's specific to it, you've got to spend a little time on basically getting them familiar with that. It's vocab particularly: glossary of terms, meaning, and things like that because even though they may know the term in one subject, [it] might be different completely in meaning in history. (Rick, History)

And may require the ESL teacher to unpack words at the prefix and root word level

I enjoy working in science classes because there's so much technical vocabulary, and being able to break those words down you know with [my] language background you can break down these words down into the smallest chunks and explain what little bits of the words mean (Neil, ESL)

Once students were proficient at the word level, it was considered to be time for them to begin to construct sentences

Lots of the kids that I'm working with are at sentence level. (Nell, Special Needs)

Before moving to the paragraph level:

The school has a structure that we work with in terms of how we structure a paragraph. (Rosa, Learning Support).

The participants agreed that paragraph-level was the most complex and extensive level of writing needed in their disciplines, and extra marks were awarded in examinations when students could demonstrate their command of an explanation. Even though some teachers were very methodical in deconstructing and reconstructing paragraphs, paragraphs were rarely described or taught according to text-type.

When ESL was differentiated from literacy, it was primarily defined by particular teaching strategies

Traditional mainstream English teaching just didn't work with the boys that we were teaching. So I've come to rely more and more on the ESL methodologies. And I guess through my role as

Head Teacher Teaching and Learning I've tried to get them used more consistently across the school in all KLAs. (Simon, Head of Teaching and Learning)

you need to be able to have a look at a kid's writing and be able to identify [what isn't working] and give them the strategies. (Rosa, Learning Support)

Yet teaching students with English as an additional language was not generally perceived as a specialist field even by teachers who had studied ESL. This was underlined by how the faculties in both schools were structured. Planning for teaching English language learners (ELLs) was primarily the responsibility of the Faculty of Teaching and Learning in both schools, but in the teachers' minds, ESL was perceived as fitting within curriculum English and trained English teachers would have the necessary skills

While I don't have ESL training, I had taught, obviously this is an ESL school, in every classroom anyway and I had taught the ESL at HSC course because at that time when I come here it was being taught by mainstream English teachers (Marlene, Head of Teaching and Learning)

or learning support. One teacher noted that

I guess in our school, in our context, learning support to me is actually giving that extra support to those kids that need it, be it ESL, be it learning difficulties (Rosa, Learning Support)

Only two of the five teachers with management responsibilities had any tertiary-level preparation for ESL, but this did not cause them concern because of the commonly held belief that learning in an additional language for EALs was the same as learning literacy skills, and they were confident literacy teachers. Furthermore, the relationship between learning subject content and learning an additional language seemed unclear, even to teachers with an interest in the process of language learning:

There's always the pressure to teach the content and the skills, you know, to get through. You can't spend all of your time just doing English language but you've got to because otherwise they can't do anything else. (Rick, History)

This theme illustrates how subject teachers felt confident about teaching EAL students. They reported having a good command of literacy strategies and applied approaches they had observed in primary schools. While these beliefs encouraged some teachers to consider metacognition, it

was generally felt that EAL students were unlikely to take an academic path. Teachers revealed conceptions that EAL students benefited from teaching discrete elements of language at the morpheme and word level rather than maintaining a focus on language function and meaning. However, some of these practices were inconsistent with their stated beliefs, and/or with theories about language and language learning.

Figure 2: Teachers' conceptions compared to practices from literature

Participants' beliefs about good teaching (supported by language teaching research)	BUT	Participants' misconceptions about teaching language learners (that lack empirical support)
Know the learner		Teaching adolescent EALs is the same as teaching primary students (young L1 learners) so simplify cognitive demands (according to reading age)
Share learning objectives from the curriculum, create success criteria, and ensure there are opportunities for feedback including self-assessment.		Teaching EALs is the same as teaching literacy to struggling L1 learners so reduce the curriculum and use the same literacy strategies as for L1 learners.
Involve students in rich (cognitively challenging) tasks		Simplify subject matter to orientate learning towards a practical/ community application.
Maintain an explicit focus on language		Teach discrete elements of language (including spelling) then move up to the sentence and paragraph level.
Model and deconstruct subject-related text types		Teach English language before attempting curriculum content.
Use ICT extensively to allow opportunities to engage with text in different ways, and for motivation.		Use ICT (like an interactive whiteboard) as a language teaching strategy

Encourage oral interaction that may include L1		Prioritise whole class discussion
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5. Discussion

What do content teachers in Australia know about language? The teachers in this study did not know that the AC could offer them a great deal of linguistic support to understand how language shapes meaning in their particular subject areas.

Knowledge about the new curriculum

Data were gathered the same year as the AC was published, yet none of the mainstream teachers was familiar with it. It commonly takes time for teachers to respond to educational initiatives but this lack of awareness was of concern for two reasons. Firstly, even though there is a specific curriculum strand within English for students with English as an additional language or dialect (EAL/D), this is not the only learning area where EAL/D students' learning is supported. The AC is explicit about the text types and text structures covered in seven different subject areas at every different level of the curriculum. In other words, the AC spells out the language demands of each subject and so the AC has the potential to be a useful resource for teachers. This was overlooked. Secondly, the level of detail about the language specific to different subjects in the AC follows perhaps 30 years of research into SFL, and almost as many years of teacher PD on the teaching and learning of EAL students.

Knowledge about language

The participants identified a number of general but powerful teaching strategies that research identifies as effective in enhancing the learning of EALs, which may have been absorbed from prior PD. However, specific *knowledge about language* gained from these years of PD appears to have been negligible. The participants seemed to share a common metalanguage regardless of their subject area or familiarity with teaching EAL learners. This lexicon included vocabulary, noun, verb, prefix, root word, sentence, paragraph, text, decoding, spelling and reading age. It did not cover field, mode, tenor, function, genres (other than recount), or reflect more than a superficial sense of text structure (Schleppegrell, 2013). This limited toolkit of language to describe how language functions in their content areas may have reflected a limited understanding of the workings of language, or a limited knowledge of how second languages are

learnt; but appeared to circumscribe how they could unpack texts with their EAL students (Derewianka, 2012; Hammond & Jones, 2012).). Metalanguage requires technical vocabulary- which is the one aspect of language teachers are confident about teaching, and which students expect to learn at secondary school (Gleeson, 2015). However, teachers in this study were wary of terms specific to language learning and defaulted to metalanguage familiar from their own education or acquired from valued (primary school or literacy) colleagues. The participant teachers cared very much about supporting their EAL students yet seemed unaware that they had gaps in their knowledge about language, or that these gaps had the potential to restrict their repertoire of support.

What do teachers need to learn about language?

Subject teachers appear to lack a solid understanding of the mechanics of learning and discussing language. They seem not to realise that (second) language learning is a science with its own content, language and pedagogy (Bunch, 2013). It is challenging to know how to persuade teachers of EAL students that this is a lack in their professional repertoire and that if they were to develop a “conscious awareness ... of the complex workings of the linguistic technology in construing [subject] knowledge, beliefs, and worldviews ... With such explicit knowledge and understanding, ... [they would] be in a better position to apprentice their students to “scientific” ways of reading, writing, thinking, and reasoning” (Fang, 2005, p.346).

Research from Australia (Derewianka, 2012) as well as internationally (Fang & Schleppegrell, 2010) suggests that mainstream teachers can use systemic functional linguistics (SFL) as a conceptual framework to enrich their understanding of how academic language works to shape disciplinary meaning. This contrasts with the insights knowledge about language (KAL) can offer teachers and learners. Schleppegrell’s (2014) work illustrates how elementary school teachers and even very young EAL students can confidently use SFL structures to analyse and construct science texts. Other studies illustrate that SFL can also be used as a platform for building critical literacy and high level thinking (O’Hallaron, Palinscar, & Schleppegrell, 2015). This offers a stark contrast to the participant teachers’ common-sense desire to build understanding through simplification. A SFL approach is additive in supporting teachers and

learners to collectively make sense of how language is shaped for different academic purposes in a meaningful subject-matter context.

When and how might teachers learn about language?

This is a perennial question. The obvious options are through pre-service and/or in-service programmes. Most initial teacher education programmes in Australia have historically included modules on teaching EAL students but these tend to be minor or optional subjects. Several of the participant teachers were relatively new to teaching but only one reported engaging taking a module related to EALs during her pre-service teacher education. Love (2010) advocates for teaching language/literacy pedagogical content knowledge as a *core* paper and gives the example of how this works in a Master of Teaching (secondary) programme. Including a TESSOL¹ strand as part of a mainstream teaching qualification has the potential to normalise these skills and engage subject teachers at pre-service stage of their profession.

PD about second language learning has been offered at state level for decades (Veel, 2006). Specialist TESOL qualifications are available through many universities, though only one of the mainstream subject teachers in this study had received this training and it had been so long ago, he confessed to have forgotten the content and he now viewed his role as being a support to his subject teaching colleagues.

Ideally, ESL teachers and subject teachers will work together develop KAL and pedagogies that extend EAL students' learning beyond their existing proficiency and trajectory. Partnership teaching, where ESL and subject teachers work together to share their complementary knowledge and expertise, has existed in Australia and elsewhere for more than thirty years Davison (2006). In the schools where the current study took place, partnership teaching was a routine and highly valued practice but did not appear to extend beyond the compliance and accommodation phases. The ESL teacher, while respected as a colleague, was not deferred to as an expert with specialist knowledge that the subject teachers might learn from. While such

¹ Teaching English to Speakers of Other Languages in Schools

partnerships are useful in sharing the teaching load when there are large numbers of EAL students in a class, they do not provide reciprocal professional learning.

Other partnership structures for PD occur between teachers and tertiary institutions. Walqui and van Lier's (2010) vision for teachers of EAL students includes some of the same practices espoused by the participant teachers as good teaching (Figure 2). However, they also add particular values and teaching strategies that the participants overlooked such as maintaining conceptual and intellectual rigour (not by simplifying but using scaffolding), increasing opportunities for student and teacher interaction, and sustaining a language focus. The approach to PD practised by Walqui and Van Lier is an extended apprenticeship model between participating teachers and TESSOL specialists. There is similar empirical evidence from ten years of implementing Sheltered Instruction Observational Protocol that subject teachers find it easier to engage with PD when it can be applied within their own teaching context over a sustained period of time (Echevarria, Vogt & Short, 2008). This supports other international evidence (Lee & Buxton, 2013) that effective PD (for science teachers) includes sufficient subject content, active and collaborative learning in a coherent structure over an extended period. Possibly a version of these American models might find success in Australia as well.

6. Conclusions

What do content teachers in Australia know about language? Despite years of PD and the development of a language-specific curriculum, there is little to suggest that subject teachers have more than a superficial understanding of the language necessary for teaching EAL students, or have a desire to learn more. This study suggests that they appear reluctant to use the Australian curriculum as a resource that integrates language features with content knowledge. Their perspectives and experiences of what makes good teaching have given subject teachers a repertoire of strategies that they feel are sufficient to meet these students' needs. However, literature suggests that there are ways to encourage them to extend these perceptions. Through including core TESSOL modules in preservice education followed by sustained professional development sessions and collaboration with ESL teachers and possibly outside experts, they may gain the confidence to integrate into language into their content learning outcomes, then implement purposeful instructional techniques to promote language learning.

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