

Nguyen, M. H. & Penry Williams, C. (2019). A preservice teacher's learning of instructional scaffolding in the EAL practicum. *Australian Journal of Language and Literacy*, 42(3), 156–166. (Author accepted manuscript, available with publisher's permission)

A preservice teacher's learning of instructional scaffolding in the EAL practicum

Minh Hue Nguyen, Faculty of Education, Monash University

Cara Penry Williams, Department of Languages and Linguistics, La Trobe University & Department of Humanities, University of Derby

Abstract

This qualitative case study examines how a preservice English as an Additional Language (EAL) teacher from the Faculty of Education at a large Melbourne-based university learned to scaffold EAL learning during a two-week practicum in a secondary school and the factors shaping his cognition. The data sources include individual interviews, oral reflections on lessons and recordings of those same lessons. The study was underpinned by a sociocultural perspective on scaffolding and van de Pol, Volman, and Beishuizen's (2010) framework for analysing scaffolding, which is based on a synthesis of previous models and findings. The findings indicate that the preservice teacher implemented a number of scaffolding strategies during the EAL practicum. The use of these strategies was shaped by the preservice teacher's theoretical knowledge of scaffolding and belief about its importance, which he gained from the teacher education coursework and his prior practicum experience. Learning within practice was also found to be important in his cognition of scaffolding as through the practicum he developed knowledge about his students' abilities and their difficulties in learning EAL, which are the basis for his contingent scaffolding strategies. Based on the findings, the paper suggests that instructional scaffolding is an important area of professional learning, especially for teachers working with EAL students, and needs to be explicitly built into teacher education in both coursework and the teaching practicum.

Key words: EAL, scaffolding, sociocultural theory, preservice teachers

Introduction

In Australian government schooling, the population of EAL students is continually growing and increasing in diversity. According to the Department of Education and Training (2018), in 2015/6 in the state of Victoria 28% of students came from language backgrounds other than English (LBOTE), equating to 159,863 students in Victorian government schools (an

increase from 153,277 in 2014 and 145,369 in 2013). In 2016, there were 6,481 newly-arrived students from 135 language backgrounds (compared to 125 language backgrounds in 2015), and 58,714 students eligible for additional support for learning EAL in a mainstream school. These students have diverse cultural, linguistic, and educational backgrounds, with the newly-arrived students alone born in 127 countries. EAL students may be presented with a number of challenges in EAL learning due to, for example, limited or no previous education, varied level of literacy experience in their main language, differences between language systems, intercultural awareness, assumed cultural understanding, and expectations regarding schooling.

Faced with the above-mentioned high level of challenge, these students require rich support to develop the English language skills and knowledge necessary to access the mainstream curriculum and to function effectively in Australian schooling (Department of Education and Training, 2015). It has been argued that optimal learning happens when students¹ are faced with a high level of challenge and provided with a high level of support (Gibbons, 2009; Mariani, 1997). This view is grounded in Vygotsky's (1978, 1987) sociocultural theory (SCT) of learning, which sees intellectual development as originating in interaction and sociocultural contexts of learning and teaching. It recognises that when

¹ Various terms are used in the literature review to refer to the person who provides scaffolding and those who receive it, such as adult/child, tutor/tutee, and teacher/student.

This is to maintain the original contextual essence of the theories and research in their varied contexts. In the current paper, we focus on a sub-set of scaffolding practices provided by a preservice teacher to secondary EAL students.

provided with *scaffolding*, students can reach a higher level of performance than when unassisted (Vygotsky, 1978).

Teacher scaffolding has been claimed to positively enhance language learning (Gibbons, 2009; Hammond & Gibbons, 2005; Riazi & Rezaii, 2011; Walqui, 2006). Therefore, second language teacher education emphasises developing preservice teachers' ability to scaffold EAL learning (Many, Dewberry, Taylor, & Coady, 2009; Newell & Connors, 2011). The teaching practicum is an important opportunity for preservice teachers to translate their theoretical understanding into practice in a classroom context. Therefore, much attention has been paid to language teacher learning during practicums. Some of the common issues of interest include identity development (Dang, 2013; Gao & Benson, 2012; Nguyen, 2017; Trent, 2013), emotion (Dang, 2013; Golombek & Doran, 2014; Nguyen, 2014), the challenges in collaborating with mentor teachers (Farrell, 2008; Nguyen, 2014; Nguyen & Parr, 2018; Trent, 2013; Yuan & Lee, 2015) as well as positive influences of mentoring (Gao & Benson, 2012; Urzúa & Vásquez, 2008). However, there is a paucity of research exploring preservice language teachers' cognition of pedagogical practices during the practicum (Borg, 2011; Nguyen & Brown, 2016), including in the area of instructional scaffolding (Many et al., 2009).

In this study, we draw on the concept of teacher cognition, which is defined as "what teachers do" in their professional context in relation to what they "think, know, and believe" (Borg, 2011, p. 218). We conceptualise instructional scaffolding as including both macro designed-in scaffolding and micro interactional scaffolding (Hammond & Gibbons, 2005; Many et al., 2009). Macro scaffolding refers to the support designed when teachers plan for

instructional experiences while micro scaffolding is teachers' response to teachable moments during instruction itself (Hammond & Gibbons, 2005).

Although the scaffolding strategies featured in this article are not novel ideas, exploring how a preservice teacher might practice the strategies in a real teaching context as opposed to micro-teaching situations is a new perspective that this article contributes to the field of EAL teacher education. The insights from this could potentially inform EAL teacher education in developing culturally and contextually responsive teachers able to meet the diverse needs of their students. The article also adds to the scant literature on pedagogical practices by preservice teachers during the practicum. In aiming to meet some of the discussed challenges, this study investigates the following research questions:

1. How did the preservice teacher scaffold EAL learning in the practicum?
2. What factors shaped the preservice teacher's cognition of instructional scaffolding ?

Theoretical framework

The education field, and language education in particular, has seen increasing popularity of sociocultural theory. Lantolf and colleagues (Lantolf, 2000b, 2006; Lantolf & Beckett, 2009) provide fairly comprehensive timelines and reviews of a large evolving body of research into language learning from a sociocultural perspective. Within this literature, two important sociocultural concepts are the Zone of Proximal Development (ZPD) (Vygotsky, 1978) and the "scaffolding" metaphor developed by Wood, Bruner, and Ross (1976). This section discusses these two concepts, the relationship between them and the implications they have for EAL education.

The zone of proximal development

'ZPD' was proposed to conceptualise how cognitive development occurs in children (Ohta, 2005). Vygotsky defined ZPD as "the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (1978, p. 86). He argued that in order to understand the relations of cognitive development to learning capacity, both the actual and potential levels of development must be established. According to Vygotsky (1978), the former "defines functions that have already matured, that is, the end product of development" (p. 86); it is the learner's ability to solve a problem unassisted. The latter "defines those functions that have not yet matured but are in the process of maturation, functions that will mature tomorrow but are currently in an embryonic state" (p. 86), that is, skills that the learner can perform only with assistance. ZPD is the distance between these two levels of development.

Lantolf and Appel (1994) highlighted two aspects critical to Vygotskian theory and posited that the ZPD as a part of the theory should be understood with regards to them. The first aspect is the interaction between an adult or a more capable peer who already knows how to solve a problem and a novice who does not. Vygotsky's concept of ZPD is underpinned by a core sociocultural tenet that learning is a social process. Through this social interaction in the ZPD, the adult or more capable peer assists the novice in internalising higher mental functions. The second aspect is the use of mediating tools, such as language, books or other artefacts, which enable collaboration and assistance to take place

in the ZPD, enabling the transition from intermental activity (i.e., mental activity in social interactions) to intramental activity (i.e., mental activity within the individual).

Vygotsky's notion of ZPD has been interpreted variedly (Kinging, 2002; Lantolf, 2000a; Wells, 1999). In second language education, it has been adapted and applied beyond the context of child–adult relationship that is originally associated with the ZPD concept. Some researchers hold that the interaction within the ZPD requires an expert and a novice (see Lantolf, 2000a; Nassaji & Cumming, 2000). Some broaden the scope of ZPD to include peer collaboration (Antón & Dicamilla, 1999; Carmichael-Wong & Vine, 2004; De Guerrero & Villamil, 2000; Ohta, 2000). Others contend that ZPD should be understood as task-specific, reciprocal, open-ended, and emergent (Wells, 1999) rather than a fixed-trait of a learner (Chaiklin, 2003; Nassaji & Swain, 2000). Despite the varied understandings, all of these authors have identified key components of ZPD, including a problem or task and a person who when provided with assistance in the ZPD, can perform better than when no assistance is provided. ZPD is also linked closely to another sociocultural concept – *scaffolding*, via the mediation being other-regulated before it is self-regulated (Lantolf & Thorne, 2007).

Scaffolding

The metaphor of *scaffolding* was introduced by Wood et al. (1976) for the support provided to a child or novice by an adult or expert in one-on-one playful tutorial interactions. Such scaffolding “enables a child or novice to solve a problem, carry out a task or achieve a goal which would be beyond his [*sic*] unassisted efforts” (p. 90). The researchers suggest six characteristics of successful scaffolding: (a) recruiting the tutee's interest in the task; (b) reducing the degree of freedom in the task to make it manageable to the tutee; (c)

maintaining goal direction; (d) marking critical features; (e) controlling frustration; and (f) modelling solutions to the task (p. 98). They argue that scaffolding may result in “development of task competence by the learner at a pace that would far outstrip his [sic] unassisted efforts” (p. 90).

The essence of Wood et al.’s (1976) notion of scaffolding was that the child was given a task above his/her current ability but within his/her capacity. The child played with the task for a while, and the adult only intervened when the child had difficulty and needed support. Finally, if the child could “pace the task for himself [sic]”, the tutor then “left the child to his [sic] own devices” and only intervened when the child stopped or struggled with constructing (p. 92). This procedure is characterised as graduated, contingent (Carmichael-Wong & Vine, 2004; Lantolf & Aljaafreh, 1995), mediated (Tabak, 2004), and fading (Pea, 2004; Sherin, Reiser, & Edelson, 2004).

There have been varied interpretations of *scaffolding* in various contexts including, for example, formal child or adult educational contexts, interaction between parents and children, mainstream schooling as well as second language education, which makes it a complex construct. Its use has expanded beyond face-to-face expert–novice or adult–child interactions to encompass peer collaboration (Barnard, 2002; De Guerrero & Villamil, 2000; Nguyen, 2013), interaction between a teacher and a group of students (Davis & Miyake, 2004; Many et al., 2009), and online interaction (Rambe, 2012).

In reviewing a decade of research on teachers’ scaffolding, van de Pol et al. (2010) arrived at an integrative framework for analysing scaffolding that distinguishes five

intentions and six means of scaffolding. The intentions are *direction maintenance*, *cognitive structuring*, *reduction of the degrees of freedom*, *recruitment*, and *contingency management/frustration control*. The scaffolding means are *feeding back*, *giving hints*, *instructing*, *explaining*, *modelling*, and *questioning*. Whilst these means are largely clear from their names, the intentions need further explanation.

The first of these, *direction maintenance*, relates to the support of metacognitive activity and ensuring that attention to learning and goals is enduring. *Cognitive structuring* aids the cognition of students via the teacher providing schemas or explanations for students to use to organize new information and experience. *Reduction of the degrees of freedom* also assists with the cognitive functions of students, by reducing demands on them by completing elements beyond their current level of development, therefore simplifying the task. The final two intentions concern scaffolding students' affect. *Recruitment* involves engaging interest in the task and supporting task-oriented participation. Finally, *contingency management/frustration control* involves maintaining motivation and high-level performance through reward, punishment and minimising frustration. It is through these intentions and the means which can be associated with each of them, that the *transfer of responsibility* shifts to the students as the support of the teacher fades over time. During this process *contingency* is key in that the teacher adjusts his/her scaffolding to the current needs of the students (van de Pol et al., 2010). This ensures that teachers are working in ZPD and not providing too much or too little scaffolding.

Research on scaffolding in second language education

Whilst scaffolding can be used in the completion of any task, when considered alongside ZPD, the focus is on the development in the learner and eventual self-regulation with the relinquishing of control (Lantolf & Thorne, 2007). This makes it a particularly useful lens for analysing classroom-based second language learning and differentiates it from general teaching.

According to SCT, second language learners need both “challenge and effective support” in teaching/learning (Storch, 2017, p. 77) and the theory therefore promotes awareness of the importance of scaffolding in enabling development. There have been a range of methods and task types employed in studies of scaffolding. Recently there has been increased use of experimental designs which measure the impact of scaffolding in contrast to other teaching conditions for example in writing (Riazi & Rezaii, 2011; Storch, 2017). There have further been calls for teachers to critically reflect on their practices (Storch, 2017). Still there are few accounts of the reflection on development of scaffolding strategies and how this is done. Notable exceptions include McCormick and Donato’s (2000) study of the use of questions by one instructor in a university setting and Hammond and Gibbons’ (2005) model based on practice and action-research. There has also been some research examining how preservice teachers use scaffolding in instruction within K–5 classrooms (Many et al., 2009; Many, Taylor, Wang, Sachs, & Schreiber, 2007) and in English language arts in secondary schools (Newell & Connors, 2011). Gaps in the current literature include studies that engage with preservice teachers’ instructional scaffolding during school-based EAL teaching practicum. This motivated the current study on a preservice EAL teacher’s scaffolding during practicum in a secondary school.

Methodology

Research design

The present study uses a qualitative case study design with a focus on a preservice teacher, Frank, while on an EAL secondary practicum.² A case study is “an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident” (Yin, 2009, p. 18). A case study and qualitative approach allows for in-depth understandings of a phenomenon, in this case Frank’s scaffolding in an EAL context.

Participant and settings

The study focuses on a convenience case, namely Frank, who was a preservice teacher enrolled in an EAL program at Greystone University. One of the authors visited a coursework class to explain the research and recruit participants, and Frank volunteered to consent and participate in the study. There was no prior relationship between the researchers and Frank. Frank, a Singaporean man in his early 30s, had been in Australia for five years. He entered the double Business–EAL teacher education program with rich and varied professional experiences stemming from a Bachelor of Business Management and several vocational certificates including childcare and then education. He considers himself a native speaker of English because he has been speaking it since he was born and all his school subjects were taught in English.

² All institutional and personal names within the study are pseudonyms.

Founded in the 1960s, Redwood Secondary College is a culturally diverse learning-community located in a multicultural area of the Southern Metropolitan Region in Melbourne, Victoria. It is a co-educational government secondary school with an enrolment of about 400 students. The school has a large cohort of EAL students from a range of backgrounds, including migrants, permanent residents, and recent arrivals. Many of the students were refugees from low socio-economic backgrounds and had limited access to previous education and, via this being the case intergenerationally, academic culture at home. Year 7 and 8 EAL students have small intensive classes and extra EAL support. Year 10s, 11s, and 12s also have extra support in EAL to help them perform better in the Victorian Certificate of Education (final two years of secondary schooling, which form the basis of the score used for tertiary education entrance). Year 9s, however, did not receive extra EAL support (e.g., individual or group withdrawal support) in addition to their regular EAL classes, which were run weekly through four 48 minute periods.

The study took place during the second of two practicums. This round was in the second semester of the teacher education program and lasted five weeks. Student teachers taught EAL for two weeks and spent the remaining three weeks teaching their second specialist subjects. Frank taught Year 9 classes during the EAL practicum under research. The school did not have a curriculum document for EAL at the time, but Frank was expected to teach them any of a range of types of writing including creative, personal, expository, discursive, and argumentative writing.

Data collection and analysis

Interview is an effective way for researchers to interact with participants and understand their activity and interpretation of it (Neuman, 2011). This study collected data through three individual interviews with Frank before, in the middle of and after the practicum in order to understand Frank's scaffolding practice and the factors shaping his cognition of scaffolding. Questions about scaffolding strategies were guided by the theoretical framework described above and analysis of Frank's lesson plans and lesson recordings. Each interview lasted 45-60 minutes. Other triangulated data sources include Frank's 27 minutes of oral reflection on teaching, which shed further light into his scaffolding and driving factors, and his six self-audio-recorded lessons (totalling approximately 290 minutes), which provide real-time evidence of his scaffolding practice. While the other data were transcribed verbatim, notes were taken while listening to the lesson recordings as we did not have permission to analyse speech from students.

The transcribed data were then analysed using qualitative content analysis (Merriam, 2009), which means the transcripts were analysed closely with attention to content rather than linguistic and discourse features. This allows for a holistic and comprehensive examination of complex social phenomena (Kohlbacher, 2006) and efficient classification of rich amounts of textual data into themes in-line with the research questions (Hsieh & Shannon, 2005). To support data analysis, NVivo 10 Software was used for storing, organising, retrieving, and coding data. Data coding was performed on NVivo by one of the researcher-authors without using NVivo's automatic analysis functions because these are not useful in such qualitative analysis that aims to understand the nuances of meaning and the experiences and interpretations of the participants. The data were coded against the

scaffolding strategies described in the theoretical framework (van de Pol et al., 2010) and related influential factors.. A code is used at the end of each data excerpt to indicate the data source, with F.IN.1, F.IN.2 and F.IN.3 referring to Frank's interviews; and F.R to Frank's reflection. Less relevant parts of talk were ellipited and replaced with [...] in the quotes used in this paper.

Findings and discussion

Scaffolding practice

The data show a number of scaffolding strategies that Frank used in supporting his EAL students. His scaffolding was firstly evident in his integration of a structured vocabulary book with other aspects of EAL learning and content areas. Frank's scaffolding was informed by his understanding the students' unassisted abilities; that is, the actual level of development in ZPD (Vygotsky, 1978). In a reflective entry, Frank commented:

I've got kids in there like I said who are S1, barely S2 in any of the skills and yet they walk out of my classroom and go to Maths, Humanities and Science, so I know they're not coping. They come to me and tell me they're not coping. [...]. They're very very weak, and they're not very confident at all. (F.R)

Here, Frank demonstrated an understanding of the students' difficulties, seen through their low proficiency levels (e.g., S1, S2³), their struggles in content areas, and their lack of confidence in using English. Frank's decision to focus on vocabulary seems to have strong theoretical underpinnings since vocabulary has long been considered central to second language learning (Nation, 1990, 2001; Richards, 1976) and "without vocabulary nothing can be conveyed" (Wilkins, 1972, pp. 111-112).

³ S1, S2 refer to some of the stages of the EAL Developmental Continuum used in Victorian secondary schools to assess EAL learners.

Frank continued to explain how he used the vocabulary book to assist vocabulary development:

At the start of the second week, which is now, I started to get them to use a vocabulary book. So, I bought for them an exercise book. So, everybody has got an exercise book, and I had to tell them to divide each page into three, write down words that they don't understand on one column, write down the meaning of the word either in English or in their own language, you know, whatever easier for them, at the second column. And the third column will be using that word in a sentence, so they have to write down a whole new sentence. (F.R)

The excerpt clearly shows Frank's *cognitive structuring* intention (i.e., the teacher offers "explanatory and belief structures that organise and justify" (Tharp & Gallimore, 1988, p. 63)) and *instructing* means (i.e., the teacher tells the students what to do (van de Pol et al., 2010)). By *instructing* the students to divide each page of the book into three columns, Frank created a *cognitive structure* to assist the students' learning and provided the opportunity for them to learn the form of words, their dictionary meaning, and their use in a specific context of a sentence. In the recorded lesson in which Frank introduced the vocabulary books and in those after it, Frank reminds students to use the book and how to do so. There is evidence of *cognitive structuring* in his highlighting of the purposes for this and the means of *modelling* this strategy of vocabulary learning and *explaining*. There has been empirical evidence to suggest that drawing students' attention to form, meaning and use of words in context reinforces learning of vocabulary and increases the chance that students will be able to use the words (Nation & Gu, 2007; Nation & Laufer, 2012). In this way, Frank is scaffolding their development but also setting up the *transfer of responsibility* (van de Pol et al., 2010). In lessons where words are explained, the recordings show that students are encouraged to add the words they have learned the meaning of but also to later use a dictionary to check in the case of any terms they still find unclear.

Over the lessons, Frank introduced new elements to this task, mentioning that they can use their home language in defining the terms and suggesting that it should be used in all classes, not just EAL. The building of vocabulary can be understood as a goal Frank developed and held for more than one individual EAL lesson:

So, this vocabulary book helps them to write down the words that they don't understand. They can be used in any subjects. So, in any subject that they don't understand a word, they write down the word in the book, look in the dictionary. And maybe if they don't understand it in the dictionary, they can look for an answer online in their own language what it is. They have to write that down in the second column. So, after they know what the word is, what the word looks like and how what it means they can then try to use it in a sentence [...]. It's a long-term activity. (F.IN.2)

This extract shows that the vocabulary book as a tool for Frank's scaffolding was intended for use beyond any given EAL lesson to transfer to multiple EAL lessons, other subjects, in-class use, and out-of-class use. This shows his *direction maintenance* strategy to ensure the students' effort is enduring. Following is a more specific example of how Frank integrated the vocabulary book in reading lessons where he used the scaffolding means *frustration control* and *modelling*, as he described in the following extract:

Well, in the classroom [...] when I asked them to read out a passage, they were more confident to try and read it out. And if they're not so confident, their friends will help them along. And if they mispronounce something, they know that they're not allowed to laugh at their friends; they'll try and correct them. So, if they said something wrong, if they read something wrong, then they will tell them what the appropriate pronunciation of the word is. I will, if some words are really really big, I will write it on the board and I'll cut the word out. I'll tell the child how to break the word up into, you know, small chunks so that they can read it, and I say you can do this with any words. You just break it up into a few chunks so that you can read. (F.IN.2)

Here, Frank reflects on an attempt to minimise possible frustration for the less confident students to keep working on the reading task by encouraging peer support and providing support when needed. It can also be inferred that Frank had established a rule that did not

allow other students to laugh at their peers. Instead of laughing, the students were encouraged to help their friends. The second half of the extract clearly revealed Frank's *modelling*, which involved offering behaviour for imitation (Wood et al., 1976) and demonstrating particular skills (Tharp & Gallimore, 1988). Evidently, the skill/behaviour that Frank demonstrated here was breaking long or difficult words down into syllables to facilitate pronunciation so that later, when the students encountered such a difficulty, they could apply the same strategy.

Another example is Frank's reflection on his plan to provide scaffolding for EAL learning through his integration of vocabulary development in writing lessons:

I'm going to get them to pick some of the words that they know how to use and put them into a story as well so that it works and then they can go, 'I can confidently use this new word. I've clocked it. I don't need to worry about this word anymore because I know what it means and I know how to use it. And if I encounter this word somewhere else, I can go back and go, OK, so how did I use this word? So, this means this. Now even that if I don't look at the dictionary, I can guess what the word means.' (F.R)

In this excerpt, Frank seems to have a clear goal in mind that through his scaffolding for using newly-learned words in writing a story, his students would develop productive vocabulary which they could access and use beyond the instructional context. The lesson recordings provide evidence that Frank actually carried out this plan and the students had opportunity to use their selected words in writing a longer piece. This activity is an example of *reduction of the degrees of freedom* which Frank used to encourage his students to complete elements beyond their current level of development in terms of their ability to use the newly-learned words.

Frank's scaffolding for vocabulary learning was further evident in his *recruitment* of interest from the students in keeping this vocabulary book so they could benefit from it. He elaborated on this:

Then I said, 'For every five words in your vocabulary book that you showed to me that you know how to use, you get a point,' so encourage them to use their, to look for more words in other subjects that they don't know, not just English. You know, they can look for it in science or humanity subjects and if they don't understand a word, write it in their book, look for it in the dictionary, write a sentence, come and look for me and then we'll sign it off, and they know how to use this word, and it's good. So, you have the visual representation of what they can do, and at the end of the day the weakest person will have at least a couple of words in his [*sic*] book, so they will know 'Oh, look! At the start, I had zero, now I know this many words.' So [...] it's an achievement for them. (F.R)

Frank recruited interest in the task by awarding points that he used for assessing if the students were eligible to have a party at the end of the practicum. Understanding that all of the students wanted the party, Frank used this as an incentive to encourage them to participate in a rewarded learning experience. This extract also revealed a means of scaffolding called *contingency management/frustration control*. In the recordings, some students frequently ask about the points system and the current tally showing that this was effective in keeping these students motivated and facilitating engagement in tasks through this delayed larger reward. The party, as opposed to just chocolates or sweets, was something that the students actually suggested, so they were recruited even in the formation of the reward.

Our analysis of the data above shows some evidence that Frank's scaffolding strategies contributed to his students' extended ability in their ZPD. The students' higher development level is also described in Frank's reflection and interview excerpts below:

So, you have the visual representation of what they can do, and at the end of the day the weakest person will have at least a couple of words in his book, so they will

know 'Oh, look! At the start, I had zero. Now I know this many words'. So [...] it's an achievement for them. (F.R)

Quite a few of the students who are, who want to improve themselves, they have been very diligent and writing lots of words that they don't understand. And I keep reminding them to look it up in the dictionary and then what we'll do is that we'll have a sharing to see, you know, what have we learnt. And I congratulate students who have learnt a few more words than they know in the past. (F.IN.2)

Students' extended ability in these excerpts means a larger and developing vocabulary size as a result of the scaffolding Frank provided through the use of the vocabulary book. He reflected particularly on one student's increased ability in English language thanks to his scaffolding:

There's a girl who's a bit... who's very weak. She does understand Cambodian pretty well and she can read and write in Cambodian but she has trouble with recognizing English, so I have suggested that she actually carries a dictionary with her so that she could look up the words. I don't care if it's an English dictionary or a translated dictionary so that she can figure out words as she goes along and she should write all the words that she has to look up in her book so that she doesn't need to look up the dictionary all the time. And then as her competence level started to grow, she'll be able to use the dictionary less, she'll be able to converse better with her friends, and I was then able to scaffold her better. (F.R)

Teacher cognition of scaffolding

Earlier in this article, we conceptualised teacher practice as a dimension of teacher cognition using what Borg refers to as "what teachers do" in relation to what they "think, know, and believe" (2011, p. 218). The section immediately above presents and discusses our findings in relation to what Frank *does* in terms of scaffolding EAL learning. It also reveals some insights into what Frank *knows* in terms of his students' ability levels and the challenges they faced in their transition to Australian schooling. In this section, we present some further insights into his understanding of scaffolding and what he *thinks, knows, and believes* that might have shaped his cognition.

First of all, the data show Frank's growing understanding of how to provide effective scaffolding for EAL learning as he transitioned from coursework at university to the EAL practicum. One of the key concepts of sociocultural theory is appropriation of mediational tools (Leontiev, 1981; Wertsch, 1991). In teaching, this refers to the process whereby "a person adopts the pedagogical tools available for use in particular social environments (e.g., schools, pre-service programs) and through this process internalises ways of thinking endemic to specific cultural practices (e.g., using phonics to teach reading)" (Grossman, Smagorinsky, & Valencia, 1999, p. 15). Appropriation of tools is not simply internalisation of the tools, but involves localisations, adaptations, and modifications (Newell, Gingrich, & Johnson, 2001). In this study, Frank had learned about the theoretical concept and practical strategies for scaffolding in his coursework, applied some of the strategies in his previous practicum, and further appropriated this tool in the current practicum. As he continued developing his understanding of the students' characteristics and needs, towards the end of the EAL practicum Frank had appropriated scaffolding as a tool and successfully embarked on meeting the needs of the students. The findings overall show that Frank was able to carry out context responsive teaching (Boon & Lewthwaite, 2015; Le, 2018) which involves his localisations, adaptations, and modifications of scaffolding as a pedagogical tool to suit the particular teaching context at hand.

Secondly, Frank appears to know about scaffolding from the coursework he completed at university, and he had an opportunity to apply scaffolding techniques during his Business practicum preceding the EAL placement:

The Pedagogy [unit] is good, telling us how to scaffold, telling us how students learn is important. [...] In my previous placement, I had a couple of students whose main language was not English. They came from China. And although their command of English was not great, they knew the concept, but they were not able to express as much and not confident in expressing themselves. So, learning about the techniques and how to scaffold students was helpful. (F.IN.1)

The data show that, by the time Frank entered the EAL practicum, he had developed some scaffolding techniques through coursework and had experience using them in the first practicum. This can be seen as the basis he needed to continue scaffolding practice in the second practicum. The excerpt above also reveals Frank's belief that scaffolding is an important and helpful tool for EAL teaching.

Moreover, Frank's knowledge about scaffolding did not only originate in his learning from university coursework and previous teaching experience. He also learned to scaffold EAL learning within his practice during the current practicum. He recounted the following when asked to reflect on the main things that he learned during the EAL practicum:

Well, a bit more aware of, like, in EAL there're a lot of things that you cannot, like, talk about, depending on where the students come from. Some of them are, like, refugees, so you don't want to talk about like their home countries. [...] Some of them are refugees and are, like, orphans, so they don't have their parents. So, you don't want to talk about, like, 'What does your mum or dad do?', that kind of thing. They've got nothing to say about that. You know, some of them have not, like, picked up story books to read, so they don't know what's in a story book. Things like that I have to learn how to give them good scaffolding. Otherwise they can't pick it up. (F.IN.3)

Apparently, Frank had learned a great deal about his students' social, economic and academic background 'on the job'. This assisted him in providing effective, *contingent* scaffolding that matched their needs and circumstances. In particular, the intentions related to affect, *recruitment* and *contingency management/frustration control*, could be difficult in

circumstances that exclude the students' experiences and prevent them from having opportunities to contribute.

Conclusions and implications

As in many places within Australian, and indeed many internationally, Victorian EAL classrooms are increasingly diverse. Students need support to develop their abilities in EAL in increasingly complex environments, and scaffolding has been found to be an effective way to do this (Gibbons, 2009; Hammond & Gibbons, 2005; Riazi & Rezaii, 2011; Walqui, 2006). Following SCT and the notion of ZPD, scaffolding allows increased ability through someone reducing and focussing the task for the novice (van de Pol et al., 2010). EAL teacher education, including at Greystone University, recognises the importance of preservice teachers developing these skills, so they are emphasised in programs. Despite this importance in both learning and teaching being noted, there has been little research on how student teachers learn to provide instructional scaffolding on practicums.

Through the case study of Frank, and using a collection of data types, this article has provided a qualitative exploration of scaffolding practice and factors which influence Frank's cognition of instructional scaffolding. The findings show that, firstly, a range of scaffolding means and intentions were inherent in Frank's lessons in his efforts to support EAL learning. For instance, through students' vocabulary journals, the intention of *cognitive structuring* was evident and achieved via the means of *instructing, modelling and explaining*. Furthermore, the role of the party as a reward and accruing points demonstrated *recruitment and contingency management/frustration control*. Frank's reflection and other sources of data suggest these were successful ways for him to both extend and support the students' EAL

learning. Importantly, these may further have supported student development beyond his teaching round through introducing new tools for mediation.

Secondly, a number of factors contributed to shaping Frank's cognition of instructional scaffolding, including what he learned during coursework, previous practicum experience, and his professional learning during the practicum. Frank became increasingly aware of and willing to respond to students' current levels of development, and learned to alter his lesson plan to ensure he was asking students to perform at an appropriate level, that is, providing challenge but sufficient support to meet this. Frank was able to recognise that students needed the task to be more focussed and elements to be explained clearly before they could engage with it in the way he had originally planned. These exemplify learning to responsively apply theory presented in education (Boon & Lewthwaite, 2015; Le, 2018).

Whilst the study design of a case study results in a rich account rather than generalisability, the findings imply that what teachers "think, know, and believe" (Borg, 2011, p. 128) might vary across individuals due to different levels of experiences and backgrounds, resulting in variations in what they "do" in providing instructional scaffolding for EAL learning. Teacher educators, therefore, need to move away from focusing solely on the mechanical side of preservice teachers' practice towards understanding preservice teachers' as whole persons learning to teach (Johnson, 2009).

Finally, the study demonstrates that instructional scaffolding, despite being a form of teaching, distinguishes itself from general teaching due to a range of processes and

characteristics. Instructional scaffolding is complex and involves the teacher's understanding of theoretical concepts, contextual knowledge including knowledge of the learners' needs, and appropriate practical strategies contingent on the teaching situations. Therefore, preservice teachers must be supported in their learning of instructional scaffolding throughout coursework and practicums to achieve high level of appropriation. Teacher educators should draw connections between theory and practice as much as possible to aid the preservice teachers' transition to teaching. Teacher education programs that prepare students for scaffolding, prime them for practice, but they still need to utilise these ideas to develop their skills in instructional scaffolding. The practicum is found to be a crucial site for this learning to take place. To this end, school-based mentors can assist in the development of scaffolding skills through feedback and guidance during practicum, with student teachers able to improve their abilities even within relatively short practicum periods. Mentors are more familiar with EAL learners and the teaching context, so their support is particularly important in developing preservice teachers' knowledge of the learners and curriculum context because these are the basis for implementing successful scaffolding.

References

- Antón, M., & Dicamilla, F. J. (1999). Socio-cognitive functions of L1 collaborative interaction in the L2 classroom. *The Modern Language Journal*, 83(2), 233-247.
- Barnard, R. (2002). Peer tutoring in the primary classroom: A sociocultural interpretation of classroom interaction. *New Zealand Journal of Educational Studies*, 37(1), 57-72.
- Boon, H. J., & Lewthwaite, B. (2015). Development of an instrument to measure a facet of quality teaching: Culturally responsive pedagogy. *International Journal of Educational Research*, 72, 38-58. doi:10.1016/j.ijer.2015.05.002
- Borg, S. (2011). Language teacher education. In J. Simpson (Ed.), *The Routledge handbook of applied linguistics* (pp. 215-228). New York: Routledge.
- Carmichael-Wong, S., & Vine, E. W. (2004). Peer-scaffolding or collaborative problem-solving?: A data-based study of three learners' experience. *New Zealand Studies in Applied Linguistics*, 10(2), 39-60.
- Chaiklin, S. (2003). The zone of proximal development in Vygotsky's analysis of learning and instruction. In A. Kozulin, B. Gindis, V. S. Ageyev, & S. M. Miller (Eds.), *Vygotsky's educational theory in cultural context* (pp. 39-64). Cambridge: Cambridge University Press.
- Dang, T. K. A. (2013). Identity in activity: Examining teacher professional identity formation in the paired-placement of student teachers. *Teaching and Teacher Education*, 30, 47-59. doi:10.1016/j.tate.2012.10.006
- Davis, E. A., & Miyake, N. (2004). Explorations of scaffolding in complex classroom systems. *The Journal of the Learning Sciences*, 13(3), 265-272.
- De Guerrero, M. C. M., & Villamil, O. S. (2000). Activating the ZPD: Mutual scaffolding in L2 peer revision. *The Modern Language Journal*, 84(1), 51-68.

Department of Education and Training. (2015). *The EAL handbook: Advice to schools on programs for supporting students learning English as an additional language*. Melbourne: Victoria State Government.

Department of Education and Training. (2018). EAL Annual reports. Retrieved from <http://www.education.vic.gov.au/school/teachers/support/diversity/eal/Pages/ealonlinereports.aspx>

Farrell, T. S. C. (2008). 'Here's the book, go teach the class': ELT practicum support. *RELC Journal*, 39(2), 226-241. doi:10.1177/0033688208092186

Gao, X., & Benson, P. (2012). 'Unruly pupils' in pre-service English language teachers' teaching practicum experiences. *Journal of Education for Teaching*, 38(2), 127-140. doi:10.1080/02607476.2012.656440

Gibbons, P. (2009). *English language learners, academic literacy and thinking: Learning in the challenge zone*. Portsmouth, NH: Heinemann.

Golombek, P. R., & Doran, M. (2014). Unifying cognition, emotion, and activity in language teacher professional development. *Teaching and Teacher Education*, 39, 102-111. doi:10.1016/j.tate.2014.01.002

Grossman, P. L., Smagorinsky, P., & Valencia, S. (1999). Appropriating tools for teaching English: A theoretical framework for research on learning to teach. *American Journal of Education*, 108(1), 1-29. doi:10.2307/1085633

Hammond, J., & Gibbons, P. (2005). Putting scaffolding to work: The contribution of scaffolding in articulating ESL education. *Prospect*, 20(1), 6-30.

Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277-1288. doi:10.1177/1049732305276687

- Johnson, K. E. (2009). *Second language teacher education: A sociocultural perspective*. New York: Routledge.
- Kinginger, C. (2002). Defining the zone of proximal development in US foreign language education. *Applied Linguistics*, 23(2), 240-261.
- Kohlbacher, F. (2006). The use of qualitative content analysis in case study research. *Forum: Qualitative Social Research*, 7(1). Retrieved from <http://www.qualitative-research.net/index.php/fqs/article/view/75/153>
- Lantolf, J. P. (2000a). Introducing sociocultural theory. In J. P. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 1-26). Oxford: Oxford University Press.
- Lantolf, J. P. (2000b). Second language learning as a mediated process. *Language Teaching*, 33(2), 79-96.
- Lantolf, J. P. (2006). Sociocultural theory and L2: State of the art. *Studies in Second Language Acquisition*, 28(1), 67-109. doi:10.1017/S0272263106060037
- Lantolf, J. P., & Aljaafreh, A. (1995). Second language learning in the zone of proximal development: A revolutionary experience. *International Journal of Educational Research*, 23(7), 619-632.
- Lantolf, J. P., & Appel, G. (1994). Theoretical framework: An introduction to Vygotskian approaches to second language research. In J. P. Lantolf & G. Appel (Eds.), *Vygotskian approaches to second language research* (pp. 1-32). Norwood, NJ: Ablex.
- Lantolf, J. P., & Beckett, T. G. (2009). Research timeline for sociocultural theory and second language acquisition. *Language Teaching*, 42(4), 459-475.
doi:10.1017/S0261444809990048

- Lantolf, J. P., & Thorne, S. L. (2007). Sociocultural theory and second language learning. In B. vanPatten & J. Williams (Eds.), *Theories in second language acquisition* (pp. 201–224). Mahwah, NJ: Lawrence Erlbaum.
- Le, V. C. (2018). Remapping the teacher knowledge-base of language teacher education: A Vietnamese perspective. *Language Teaching Research*, (Online first).
doi:10.1177/1362168818777525
- Leontiev, A. N. (1981). *Problems of the development of the mind*. Moscow: Progress.
- Many, J. E., Dewberry, D., Taylor, D. L., & Coady, K. (2009). Profiles of three preservice ESOL teachers' development of instructional scaffolding. *Reading Psychology*, 30(2), 148–174. doi:10.1080/02702710802275256
- Many, J. E., Taylor, D. L., Wang, Y., Sachs, G. T., & Schreiber, H. (2007). An examination of preservice literacy teachers' initial attempts to provide instructional scaffolding. *Reading Horizons*, 48(1), 19-40.
- Mariani, L. (1997). Teacher support and teacher challenge in promoting learner autonomy. *Perspectives, a Journal of TESOL-Italy*, 23(2).
- McCormick, D., & Donato, R. (2000). Teacher questions as scaffolded assistance in an ESL classroom. In J. K. Hall & L. S. Verplaetse (Eds.), *Second and foreign language learning through classroom interaction* (pp. 183–202). Mahwah, NJ: Lawrence Erlbaum.
- Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. San Francisco: Jossey-Bass.
- Nassaji, H., & Cumming, A. (2000). What's in a ZPD? A case study of a young ESL student and teacher interacting through dialogue journals. *Language Teaching Research*, 4(2), 95–121.

- Nassaji, H., & Swain, M. (2000). A Vygotskian perspective on corrective feedback in L2: The effect of random versus negotiated help on the learning of English articles. *Language Awareness, 9*(1), 34-51.
- Nation, I. S. P. (1990). *Teaching and learning vocabulary*. New York: Newbury House.
- Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge: Cambridge University Press.
- Nation, I. S. P., & Gu, P. Y. (2007). *Focus on vocabulary*. Sydney: NCELTR, Macquarie University.
- Nation, I. S. P., & Laufer, B. (2012). Vocabulary. In S. G. a. A. Mackey (Ed.), *The Routledge handbook of second language acquisition* (pp. 163-176). New York: Routledge.
- Neuman, W. L. (2011). *Social research methods: Qualitative and quantitative approaches*. Boston: Allyn and Bacon.
- Newell, G. E., & Connors, S. P. (2011). "Why do you think that?" A supervisor's mediation of a preservice English teacher's understanding of instructional scaffolding. *English Education, 43*(3), 225–261.
- Newell, G. E., Gingrich, R. S., & Johnson, A. B. (2001). Considering the contexts for appropriating theoretical and practical tools for teaching middle and secondary English. *Research in the Teaching of English, 35* (3), 302-343.
- Nguyen, M. H. (2013). EFL students' reflections on peer scaffolding in making a collaborative oral presentation. *English Language Teaching, 6*(4), 64-73.
- Nguyen, M. H. (2014). Preservice EAL teaching as emotional experiences: Practicum experience in an Australian secondary school. *Australian Journal of Teacher Education, 39*(8), 63-84. doi:10.14221/ajte.2014v39n8.5

- Nguyen, M. H. (2017). Negotiating contradictions in developing teacher identity during the EAL practicum in Australia. *Asia-Pacific Journal of Teacher Education*, 45(4), 399-415. doi:10.1080/1359866x.2017.1295132
- Nguyen, M. H., & Brown, J. (2016). Influences on preservice writing instruction during the secondary English as an Additional Language practicum in Australia. *Australian Journal of Teacher Education (Online)*, 41(8), 84-101. doi:10.14221/ajte.2016v41n8.5
- Nguyen, M. H., & Parr, G. (2018). Mentoring practices and relationships during the EAL practicum in Australia: Contrasting narratives. In A. Fitzgerald, G. Parr, & J. Williams (Eds.), *Narratives of learning through professional experience* (pp. 87-105). Singapore: Springer.
- Ohta, A. S. (2000). Rethinking interaction in SLA: Developmentally appropriate assistance in the zone of proximal development and the acquisition of L2 grammar. In J. P. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 51-78). Oxford: Oxford University Press.
- Ohta, A. S. (2005). Interlanguage pragmatics in the zone of proximal development. *System*, 33(3), 503-517.
- Pea, R. D. (2004). The social and technical dimensions of scaffolding and related theoretical concepts for learning, education and human activity. *The Journal of the Learning Sciences*, 13(3), 423-451.
- Rambe, P. (2012). Activity theory and technology mediated interaction: Cognitive scaffolding using question-based consultation on Facebook. *Australasian Journal of Educational Technology*, 28(8), 1333-1361.
- Riazi, M., & Rezaii, M. (2011). *Teacher- and peer-scaffolding behaviors: Effects on EFL students' writing improvement*. Paper presented at the CLESOL 2010: Proceedings of the 12th

National Conference for Community Languages and ESOL, Retrieved from

<http://www.tesolanz.org.nz/>.

Richards, J. C. (1976). The role of vocabulary teaching. *TESOL Quarterly*, 10(1), 77-89.

doi:10.2307/3585941

Sherin, B., Reiser, B. J., & Edelson, D. (2004). Scaffolding analysis: Extending the scaffolding metaphor to learning artifacts. *The Journal of the Learning Sciences*, 13(3), 387-421.

Storch, N. (2017). Sociocultural theory in the L2 classroom. In S. Loewen & M. Sato (Eds.), *The Routledge handbook of instructed second language acquisition* (pp. 69–83). London: Routledge.

Tabak, I. (2004). Synergy: A complement to emerging patterns of distributed scaffolding. *The Journal of the Learning Sciences*, 13(3), 305-335.

Tharp, R. G., & Gallimore, R. (1988). *Rousing minds to life: Teaching, learning, and schooling in social context*. Cambridge: Cambridge University Press.

Trent, J. (2013). From learner to teacher: practice, language, and identity in a teaching practicum. *Asia-Pacific Journal of Teacher Education*, 41(4), 426-440.

doi:10.1080/1359866X.2013.838621

Urzúa, A., & Vásquez, C. (2008). Reflection and professional identity in teachers' future-oriented discourse. *Teaching and Teacher Education*, 24(7), 1935-1946.

doi:10.1016/j.tate.2008.04.008

van de Pol, J., Volman, M., & Beishuizen, J. (2010). Scaffolding in teacher–student interaction: A decade of research. *Educational Psychology Review*, 22(3), 271-296.

doi:10.1007/s10648-010-9127-6

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*.

Cambridge, MA: Harvard University Press.

- Vygotsky, L. S. (1987). *The collected works of L.S. Vygotsky* (Vol. 1). New York: Plenum Press.
- Walqui, A. (2006). Scaffolding instruction for English language learners: A conceptual framework. *The International Journal of Bilingual Education and Bilingualism*, 9(2), 159-180.
- Wells, G. (1999). Using L1 to master L2: A response to Antón and DiCamilla's "Socio-cognitive functions of L1 collaborative interaction in the L2 classroom". *The Modern Language Journal*, 83(2), 248-254.
- Wertsch, J. V. (1991). *Voices of the mind: A sociocultural approach to mediated action*. Cambridge, MA: Harvard University Press.
- Wilkins, D. (1972). *Linguistics in language teaching*. London: Edward Arnold.
- Wood, D., Bruner, J. S., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology and Psychiatry*, 17, 89-100.
- Yin, R. K. (2009). *Case study research: Design and methods* (4th ed.). California: SAGE.
- Yuan, R., & Lee, I. (2015). The cognitive, social and emotional processes of teacher identity construction in a pre-service teacher education programme. *Research Papers in Education*, 30(4), 1-23. doi:10.1080/02671522.2014.932830