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# **Telling cases of bilingual children's reading and writing for English-medium school: implications for pedagogy**

**Postprint**

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This article presents telling case studies of two young children's language use in Singapore. The example cases were analyzed using assessment for learning (AfL) strategies: a running record of one child's reading was examined while the other child's writing was assessed applying frameworks of writing and spelling development on a writing analysis chart. The analyses suggest the influence of each child's dominant home language and the colloquial variety of English on their learning to read and write the English of school. The study also implies a misalignment between the children's language and that expected by the materials and tasks used; due to this, the inbuilt scaffolding of the materials did not appear to provide the children with language support. The paper argues that this kind of detailed scrutiny of individual language use, through the application of AfL techniques and contrastive linguistics, provides rich, diagnostic information about the literacy development of individual children and has yet broader implications for pedagogy. The analyses suggest that the deployment of guided pedagogies in teaching young children would enable the effective use of diagnostic information from AfL procedures and the application of contextually appropriate cross-linguistic instructional strategies.

**Key words:** primary years; reading; writing

## **Introduction**

Singapore is a multilingual society with an English-medium education system. For many children, English is a non-dominant home language, but right from the start of their education in primary school, students must learn English and in English. The policy of bilingualism (Zulkifli, 2009) requires that all children learn English in Singapore, aiming for a standard which is 'internationally acceptable' (Ministry of Education [MOE], 2009a, p.7). Children learn one other language in school known as the Mother Tongue, chosen usually from Mandarin Chinese,

Malay, or Tamil. Children's linguistic experience at home and with friends in school may be a mix of these languages and others, as well as a variety of English, such as Singapore Colloquial English (SCE) or Singapore Standard English (SSE) (Gupta, 1994).

The linguistic and educational context means that teaching the subject English in Singapore does not fit neatly into any of the sub disciplines of English pedagogical theorising. It is neither a Content and Language Integrated Learning (CLIL) situation, nor typical language immersion, nor an example of sheltered instruction. English teachers teach English as a mainstream subject to classes of children who are bi- or multilingual to varying degrees in different languages, including English. In Singaporean society and the workplace, English and/or other languages may be spoken; as a result, children's exposure to English outside school also varies. There is, therefore, little published guidance for teachers that is exactly relevant to this educational environment. Two major texts used in teacher preparation programmes, are Tompkins (2013) and Winch, Ross Johnston, March, Ljungdahl and Holliday (2010). Naturally, each one deals with the context of origin; the former is written for the American context and the latter for the Australian one. Both texts very usefully and comprehensively cover children's language and literacy development, teaching approaches and instructional strategies for English, and discussions and analyses of texts written for and by children. Both textbooks do refer to theories of teaching English to bilinguals; however, in each case, this constitutes no more than 5% of the book. Of interest to this paper is formative assessment which both books present and theorise related to the teaching/learning cycle. There is, however, little specific reference to using AfL techniques to assess the language use of bilingual readers and writers.

Assessment, in particular the Primary School Leaving Examination (PSLE), is very significant in the lives of children, their parents, and their teachers in Singapore. Cheah (1998)

notes a consequent examination culture in the primary school and the backwash effect of the PSLE on teaching. Due to national concern, assessment in the primary school has been reconsidered by the parliamentary Primary Education Review and Implementation (PERI) Committee (Ministry of Education, 2009b; 2011). While recognizing the important role of examinations within the system and for reporting to stakeholders, the committee urged a change in societal and educational mind-sets with regard to assessment, calling for engaging teaching methods and more formative assessment or assessment for learning (AfL). Black and Wiliam (1998) describe this kind of assessment as providing evidence of learning derived from teachers' observations and discussions with pupils on classroom tasks. The evidence is then used to feedback into teaching and learning to meet the specific needs of pupils.

As this paper shows, the international theory and pedagogy of the textbooks for teacher education have broad value and relevance; however, the paper also argues that effective teaching is situated in particular circumstances. Thus, in addition to general theorising, evidence of children's language use in the local context is needed to steer pedagogy in Singapore. Cheah warns of the need to adjust and adapt instruction that has been designed with other linguistic environments in mind, seeing a 'need to actively mediate' teaching and assessment 'to ensure that what is implemented is instructionally sound as well as culturally appropriate' (1998, p.193/194). The micro-analysis of the samples of children's reading and writing in this article demonstrate how AfL techniques, taken from the textbooks, can provide a wealth of specific, situated information which is not only relevant for teaching the individual but also valuable for informing pedagogy in Singapore. Since the number of young children all over the world learning English in addition to other languages is growing, the *process* of gathering evidence through AfL and considering *how* it might apply to pedagogy in one local context might be helpfully transferred to others.

## **Literature review: Learning the language of school**

Learning the academic language of school is a task for all children; some do have a good start not only because the home language is English but also because the home uses an academic, school-like variety of English (Schleppegrell, 2012). Children for whom English is not dominant have to learn oral skills at the same time as literacy skills, often by means of pedagogies not designed for their language situation or culture (Jones, 2010; Sripathy 1998). Especially at the early stages of learning, reading and writing may be affected by transfers and influences from one language to another, depending on their relative orthographic depth and representation as well as children's prior exposure to them.

The language of school is a distinct variety from that of home (e.g. Schleppegrell, 2012). Cummins and Man (2007) characterize the particular features of academic language to be low frequency vocabulary (often with Latin or Greek roots), complex syntax encoding sophisticated concepts, and abstract expressions. As a result of this complexity, bilingual children, who come from homes where English is non-dominant, need seven years or the whole of primary schooling to become proficient in the academic language of school (Demie, 2013; Cummins, 2000). With particular regard to reading development (but with probable relevance to other language skills) there is evidence to suggest that multilingual children may use linguistic knowledge other than English during reading (Birch, 2002; Robertson, 2002; Gregory, 1996; Bernhardt, 1991) and so read English through a framework of their dominant language.

Koda's synthesis of research on the reading development of bilingual children (2007) describes the intricacies of developing the processing strategies of literacy in two languages.

The dual-language involvement implies continual interactions between the two languages as well as incessant adjustments in accommodating the disparate demands each language imposes. For this reason, L2<sup>1</sup> reading is cross-linguistic and, thus, inherently more complex than L1 reading (2007, p.1).

Whether English is a dominant or non-dominant language for a child in Singapore, such cognitive-linguistic crossings among languages, as described by Koda, are likely to be involved en route to developing school literacy (Dressler and Kamil, 2006; Bernhardt, 1991). In a review of research on the literacy development of bilingual children, Genesee et al. (2006) conclude that children's processing strategies may be unique to their own particular experience. Additionally, Dressler and Kamil (2006) suggest that although strategies may be language-specific, some may yet be transferable across varied reading experiences in different languages, one to another.

Another feature of the bilingual learning of school language is its simultaneity in skill acquisition. When English is non-dominant, children have to learn to speak and listen to the language at the same time as they learn to read and write it (Gregory and Kenner, 2003; Moll and Dworin, 1996). Monolingual children or those for whom English is dominant gain wide exposure to the spoken form of the language at home and benefit from literacy pedagogies, often designed for monolingual situations, which are founded on the premise of a child's mapping existing knowledge of spoken language onto print. This is in itself a complex task, depending on the varieties of home English, and it may be short-circuited in a number of ways if a child's knowledge of spoken English does not match a reading or writing task (Clarke, 1998). This may consequently become a particular challenge for bilingual children.

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<sup>1</sup> In this quotation, L1 stands for first language and L2 for second language. However, in the article the terms dominant and non-dominant are preferred because they reflect the multilingual nature of the context of Singapore.

However, despite the complexities for children in the task of developing literacy in two languages, researchers have suggested potential cognitive advantages. For example, an aspect of metacognitive and metalingual awareness important for the early stages of learning to read and write is phonological awareness. The awareness of sound and the recognition that language can be manipulated as a system is very helpful for children learning to associate sound and symbol in beginning reading and writing. Nevertheless, as Dressler and Kamil (2006) and Birch (2002) note, the cognitive potential for the transfer of knowledge and skills across languages afforded by multilingualism is mediated by a language's orthographic depth and representation relative to English (Koda, 2005 p.36), as well as the extent of a child's experience in and exposure to both of the languages. Orthographic depth refers to 'the degree of regularity in symbol-sound correspondences' (Koda, 2005 p.36) and orthographic representation refers to the 'linguistic unit each graphic symbol denotes' (Koda, 2005 p.36). Languages with a shallow orthography have a greater systematic correspondence between letter/symbol and sound while deeper orthographies have more irregularities. Koda (2007) suggests that children learning to read orthographies where there is a high degree of regularity in symbol-sound correspondence progress fast in acquiring literacy. Orthographic representation may affect readers' strategy use too; for example, strategies used to read and write Chinese, a logographic language, may tend to be visual. Thus, the cognitive advantages of bilingualism are likely to be mediated by the contrasts among languages being learnt. Contrastive linguistics (Anderson & Li, 2006), therefore, may be a very effective means of understanding bilingual learners as well as teaching them (Ballinger, Lyster, Sterzuk & Genesee, 2017).

In an important study with kindergarten children which compared the effects of three of the four official Mother Tongues of Singapore on phonological awareness, Quentin Dixon,

Chuang, and Quiroz (2012) found that knowledge of Malay, a language with a shallow orthography, could predict the level of phonological awareness in English. The researchers also found that knowledge of spoken English vocabulary was an important predictor of phonological awareness. Thus, the cross-linguistic effect was evident. However, Quentin Dixon et al. (2012) concluded that the effect was mediated by home literacy practices. Dressler and Kamil's (2006) synthesis of research in this area shows that at the early stages of literacy, the comparisons and contrasts between languages do have an effect on learning. They found, however, that at later stages, higher-order literacy skills appear to transfer across languages with greater ease and usefulness (Genesee et al. 2006; Cummins, 2000). This work suggests that a certain level of linguistic knowledge is required to assist transfer of skills. Thus, the importance of mastery of the language code is particularly important at the early stages of literacy development, a point persuasively argued by Koda (2005) and Birch (2002).

In conclusion, in Singapore, children's learning the academic language of school is a complex process and one which is related to the languages they know and use in their homes. When English is a non-dominant language for them, they learn the oral and literate forms simultaneously while in school. Learning to read and write is affected by transfers and influences from one language to another, depending on their relative orthographic depth and representation. Additionally, at the early stages of reading and writing, knowledge of the language code appears to be very important.

## **Method**

This article analyses two samples of school language completed by Jason at primary one and Nora at primary three (both names are pseudonyms) using the techniques of AfL. Each example

is offered as a bounded, separate case of intrinsic interest (Stake 2008). Rather than being representative, these are illustrative, 'instrumental' cases which provide insight into issues (Creswell, 2014 p.493). The two main issues of this paper being the influence of spoken language on children's developing literacy in multilingual contexts and the power of AfL techniques to illustrate analytically some of the processes involved in this literacy development. The cases were selected from a number generated as part of research and teacher professional development projects in two schools. The choice of these particular pieces by Jason and Nora was made, therefore, because of their potential to act as telling cases to achieve the aim of deepening educators' understandings of children's experiences of reading and writing in their regular English classrooms in Singapore, in particular, and to illustrate the *process* of analysis for a wider audience.

First, the AfL technique of running records was employed to analyse Jason's reading. The record comes from a research project reported by Jones (2011). Taking running records has been advocated as a powerful way of understanding how children read in both dominant and non-dominant languages (Tompkins, 2013; Winch et al., 2010; Gregory, 1996; Goodman, 1984). Teachers listen to and sometimes record children reading aloud in order to understand the semantic, syntactic, visual, and graphophonic cues they use to comprehend and decode texts. The cues are drawn on by means of the interactive use of reading strategies (Pressley, 2002; Garner, 1992; Grabe, 1988). When reading aloud, children may miscue or misread (Goodman, 1996) and this is taken as evidence of their linguistic processing. However, self-correction during reading reveals the use of monitoring strategies and thoughtful reading. The analysis of errors is crucial in order to understand the processes involved in a child's reading, although counting miscues does give information about reading level in relation to the book read aloud (Winch et al., 2010).

Second, Nora's writing comes from the material provided by another primary school during a professional education project focusing on the development of multilingual children's writing. A writing analysis chart (Tompkins, 2013, p. 358-359) was used to evaluate the linguistic features of Nora's writing against criteria of the developmental stages of writing and spelling. Although termed differently by writers, there are five recognizable stages of spelling development. According to Tompkins, these are emergent spelling, letter name-alphabetic spelling, within-word spelling, syllables and affixes spelling, and derivational relations spelling (2013, p.356). According to Winch et al. the developing writer is characterised by four stages: writing before school, experimental/early writing, the developing writer, and the proficient writer (2010, p.271-273). In alignment with principles of AfL, Tompkins suggests that the analysis of spelling development

provides information about students' current level of spelling development and the kinds of errors they make. Knowing students' level of spelling development helps teachers determine the appropriate type of instruction (2013, p.356-357).

The intensive study of particular features of Nora's writing on a writing analysis chart is typical of AfL procedures and the case study method (Stake, 2008). The technique and method not only help teachers identify stages of writing and spelling development, but also make visible the strategies children use as they write. Similar in aim to the running record assessment of reading, the goal of the use of the writing analysis chart is to understand *how* children use language.

The projects took place in schools. This meant that there was no opportunity to gather information from the children's homes although it would have greatly enriched the case studies. Relevant information about children's language use is that Jason and Nora speak varieties of English around their schools and with friends. Neither use English at home as a main language; Jason's family primarily use Mandarin Chinese while Nora's speak Malay.

## **Running records: analysis of Jason's reading**

### ***Jason's reading text***

Jason was recorded reading a graded reader, *Griffin the School Cat*, written by Karen Anderson and illustrated by Paolo Bellini (1996). The book is part of the theme *Animals and Pets* at level 2 in the *Sunshine Readers Scheme*. It was used for the first time in the class for taking this running record. It has features which are typical of reading scheme books, including a repeated grammatical pattern and controlled vocabulary on each double page, for example:

'Oh, you poor cat,' said the kids in room one.

'You are looking skinny. Nobody has fed you. You need a sandwich' (p. 2).

As the book progresses, the cat's moves from room to room are sequenced numerically and it is given a variety of things to eat. Thus, on each double page, only the numbers and nouns are substituted in the syntactic pattern of the text. The pictures support the text and, in each, we see children giving the cat different items to eat or drink, for example, a sandwich, some yogurt, some orange juice, and some biscuits. There is a final twist in the narrative, as the cat comes to the staffroom:

'Oh, you naughty cat,' said the teachers in the staffroom.

'You are looking fat. Everybody has fed you. You need some exercise' (p.14).

These linguistic and visual features are typical of reading scheme books and are incorporated to help children learn to read and learn language during reading by setting new vocabulary in predictable grammatical structures, for example.

### ***Analysis***

First, Jason recognizes and accurately reads common high frequency words such as some numbers and 'room', 'kids', 'cat', and 'fat'. Only some of these words are decodable. Jason also recognizes and reads a range of disyllabic words by sight, for example, 'sandwich', 'yogurt' and

'orange'. In fact, all the nouns of food and drink are recognized. In addition, Jason corrects himself five times, leading to accurate readings on four occasions. This suggests that he is monitoring his reading of words and sentences (Tompkins, 2013; Winch et al., 2010; Burns, 2001). Jason's knowledge and understanding of spoken language is evident when instead of reading 'Oh you poor cat', Jason reads 'Oh you poor lil cat', possibly drawing on a familiar collocation of 'poor' and 'little'. Instead of 'in room three' he begins 'in the', self-correcting at the word 'three', dropping the article once he realises that the noun is post modified, suggesting his syntactic knowledge. This is one of the instances of self-correction noted and implies that Jason is using information both from the text and from his semantic and syntactic knowledge of spoken English.

Second, despite these accurate readings and self-corrections using syntactic and semantic knowledge, a count of Jason's miscues shows him reading at 87.5% accuracy, below instructional level. According to Burns (2001), the percentages identified by means of running records may indicate one of three levels of reading: independent (99-100%) instructional (91-98%) and frustration (90% or below). Winch et al. (2010) suggest that the instructional level can be from 90-95% accuracy. Jason's difficulties seem to centre on tenses and unfamiliar words. While 'said' is always read accurately, being of relative high frequency in books and therefore likely to be known by sight, 'looking' and 'fed' are not. When Jason first tries 'looking', he reads 'like/look' and maintains a reading of 'look' right up until the last time the word appears. He then reads 'look/looking'. 'Fed' is always read 'feed'. If the spoken forms of these tenses are not familiar to Jason, self-monitoring will naturally be more difficult. It is probable that tense is not significant to a beginner reader who speaks Mandarin Chinese or SCE since in these languages and varieties, it is not marked by morphology, as it is in English (Ho, 2003).

Another apparent difficulty concerns the strategies used by Jason to read uncommon words with which he is not familiar, in particular 'Griffin' and 'skinny' for which he reads 'giraffe' and 'shiny'. When reading 'Griffin', he refers to the initial letter 'g' and the 'ff'. The 'ff' may be salient because of their height in relation to the other letters. The other letters are recognized but not decoded in sequence to allow for accurate pronunciation. This is again shown by the fact that Jason chooses to pronounce the /g/ in Griffin as /dz/ in giraffe, not using the information from the /r/ following /g/ in Griffin which would signal the correct pronunciation since /dz/ does not collocate with /r/. In the case of 'skinny', the initial letter 's' is recognized as well as all the others, but the 'k' is misread as 'h' and the word 'shiny' then inferred. In both cases, Jason uses initial letters and some of the others. Then he apparently grasps at the rest of the word rather than systematically decoding it. Once the word is read erroneously, the miscue persists. This suggests that although Jason has knowledge of letters and uses the effective strategy of starting with the initial consonant when reading these words, he does not apply segmenting and decoding strategies to help achieve an accurate reading (Tompkins 2013; Winch, 2010). Jason reflects a preference for paying attention to print and referring to the appearance of the words as wholes rather than using decoding strategies where appropriate.

A fourth aspect of Jason's reading concerns his ideas and feelings about this reading task. It is noticeable that he turns two pages together and therefore jumps from 'room three' to 'room six'. Although Jason seems to monitor his reading of words and phrases, shown by his self-corrections, he appears not to monitor holistically, suggesting that he is not reading for overall meaning; rather, he is reading as a task set or for a school performance. The fact that in the beginning he also reads in a very soft voice lends support to this view.

#### **Picture composition: analysis of Nora's writing**

### **Nora's writing task**

The example of Nora's writing is a composition, which she has written following three sequenced pictures with a fourth left blank to prompt the writing of an original ending. The picture composition task is likely to have originated from Heaton's (1966) method of supporting writers learning to write in English when it is a non-dominant language, by means of providing content and structure for writing through a series of pictures and associated vocabulary (helping words). Although using pictures to stimulate writing is quite common in Singapore primary schools, this is Nora's first submitted attempt, according to her teacher.

The first picture of Nora's composition task shows a boy sitting in front of the television. There is a woman pointing to the television knob with one hand and pointing away from it with the other. Children will infer that she is the boy's mother and furthermore that she is angry, for the furrowed eyebrows and the straight lines drawn alongside her arms imply this. The clock shows ten o'clock. In the second picture, the boy is crawling towards the television and has switched it on. The clock shows twelve o'clock and the room is shaded to show darkness. In the third picture, the boy is sitting in front of the television, which broadcasts a ghost frightening someone. The boy is himself frightened, which is suggested by the droplets of sweat around his face and the wavy lines surrounding him, as well as the fact that he is sitting clutching his knees. Thus, a reader should infer meaning by referring to background knowledge and visual conventions. There is a text box of helping words underneath the pictures which includes: *television addict, forced, reluctantly, crept, midnight, continued, horror movie, disobedient, frightened, and trembling*.

In the instructions to the task, the word *story* is used which, in conjunction with the pictures, suggests narrative. It is therefore expected that children will write using the

appropriate narrative structure and language features, for example, the third person, the past tense, connectors of time, and some descriptions of feeling and place (Derewianka, 1990).

### ***Analysis***

First, Nora shows that she has inferred the actions and feelings of the characters from the pictures and that she has followed the visual guidance to sequence appropriately and to produce an ending consistent with the rest of her composition. Recognizing the dramatic value of the ghost frightening the main character, she has included dialogue between the mother and son in the resolution. In addition, Nora uses adverbials of time, for example, 'one day' and sequences action using the conjunction 'then' although there is no variety in the use of connectors and sometimes the writing consists of clauses chained by 'then'. Nora nonetheless communicates meaning and pays attention to important aspects of writing narrative at the text level. She spells high frequency words accurately, for example, 'then', 'the', 'go', 'sleep', 'see', 'like', 'to', 'out'.

Nora, therefore, communicates appropriately, according to topic and text structure. However, at the level of sentence and word, she seems to experience difficulty, particularly in her use of verbs, vocabulary, and spelling. Nora writes the present tense for the dialogue at the beginning and end of her narrative appropriately but also writes what appears to be the present tense throughout for regular and irregular verbs which should be in the past tense (except for 'came') as she moves between dialogue and description. In most instances, there are no final morphemic markers, which would show past tense or third person singular present tense. This could be a spelling difficulty, for example 'wacht' sounds like 'watched' or it could be the influence of SCE in which final consonants are often not sounded (Bao, 1998), affecting the pronunciation of past tense and, therefore, the spelling (Ho, 2003). Other influences of SCE in Nora's writing appear to be 'have or have not' which is characteristic of the variety, possibly

originating in Mandarin Chinese and directly translated from 'yǒu méi yǒu' (有没有) and 'don't have' from 'méi yǒu' (没有). The spelling of 'have' here as 'heve' (l.5) reflects a common pronunciation in SCE in which /e/ is sometimes substituted for /æ/ (Hashim and Brown, 2000). In addition, the form 'seewatch' is possibly an interlanguage form of verb reduplication, used in SCE to show continuity (Fong, 2004).

Third, Nora writes meaningfully about a home situation which she may have experienced in Malay or in SCE. She uses social vocabulary rather than academic (Schleppegrell, 2012; Cummins and Man, 2007; Cummins, 2000) for her English writing, however, but finds ways to make her vocabulary suit the task, for example 'chang the story' for switching channels and 'gost come outhen' when the ghost appeared. She does also use the vocabulary of SCE, for example, 'open' and 'close' for switch on and off the television, maybe directly translated from 'kāi' (开) and 'guān' (关), respectively, in Mandarin Chinese and thence to SCE.

Fourth, it appears that Nora can follow the task procedurally, but it seems unlikely, given the vocabulary shown in her writing, that she can read and comprehend the helping words of the task. These words and phrases, such as television addict, are complex both linguistically and conceptually and while they may be heard outside school, they belong to the kind of academic English vocabulary of school writing. The word television is comprised of a Greek affix, *tele*, and a Latin root, *vision*, and the word *addict* is rooted in French legal terminology. Nora also uses collocations such as 'havri they' possibly for 'every day', 'tout then lout' maybe for 'shout out loud' and 'go sleep ray' possibly for 'go to sleep okay'. Moreover, at the beginning, Nora writes tomorrow you go to school as one word 'tomoroyougotoschool', reflecting that she has heard and acquired this as a formulaic expression and has not yet learnt to segment the sounds into separate words (Cameron, 2001). When these collocations and formulaic expressions are viewed in conjunction with the effects of SCE noted above, the

analysis suggests that Nora writes as she speaks English 'in the spoken style' of early writing, as described by Winch et al.:

The written style in these early years is often the spoken style. Obvious links such as *and*, *then* and *so* are used. There is wide use of common verbs such as *be*, *have*, *go*, *say*, *take* and *put*. Spelling is often close to pronunciation (e.g. wun = one). Nouns can be general (man, lady, policeman), often without qualification such as the use of adjectives. Concrete rather than abstract words are used ... There is not much about abstract concepts such as bravery, honesty, fear, happiness, but realistic situations occur where these qualities are apparent. Sometimes direct speech is used but usually without the punctuation marks (2010, p.277-278).

Finally, although Nora spells many high frequency words accurately, there is some insecurity in spelling multisyllabic words; for example, television is spelled in seven different ways, suggesting an unawareness of the helping words in the text box. There is also some hesitancy in the use of capitals, punctuation, and spacing. The features of Nora's spelling manifest the general description of 'within-word' spelling described in Tompkins (2013, p.356) where writers have control of single syllables without mastery of inflected grammatical word endings, for example. Thus, Nora's writing seems dependent on her knowledge of spoken English and reliant on a phonetic approach to spelling.

### **Discussion and implications**

#### ***The transfer of language processing strategies from the Mother Tongue language***

Both children appear to be transferring language strategies from their home languages to their English language use. Thus, the analysis of the two separate cases, one of reading and the other of writing, illustrate the suggestion that at the early stages of reading and writing, there is a cross-linguistic mediation of the transfer of language strategies (Dressler and Kamil 2006; Birch, 2002). However, the difference in orthographic depth and representation between these languages and English means that this application is not always a happy one. Jason's visual approach to reading English, which according to Birch (2002) entails associating the meaning

of a word with its representation ahead of sound, might be related to his parallel experience of learning to read in Mandarin Chinese, a logographic language. In learning Mandarin, pupils often memorise the characters as wholes through repeated practice in writing out the individual characters, referring to appearance and meaning and not to decoding, that is, unless they learn through the romanised form of Chinese, Hanyu Pinyin. Children may thus develop a transferred preference for using whole-word sight recognition strategies (Jones, 2007) related to meaning in reading English. Jason's apparent dependence on the visual and memory may prevent him from decoding words where it is possible and useful in English. A continued reliance on these preferred strategies may leave him little opportunity to actually develop the decoding techniques of segmenting, blending, and making analogies, which are necessary for processing unfamiliar, decodable vocabulary in English. Nonetheless, his strategy use is appropriate for non-decodable words in English, that is, those words that do not have a high degree of symbol to sound correspondence and cannot be readily segmented into units of sound.

By contrast, in writing English, Nora appears to apply strategies from her dominant language of Malay which has a more regular correspondence between letter and pronunciation than English (Jones, 2007). Nora uses 'spelling as it sounds' strategies rather than reference to spelling rules for the word 'television', for instance. Pedagogies for teaching early reading in Malay in Singapore are founded upon the systematic learning of consonant and vowel sounds and the application of this knowledge through decoding skills, often focusing first on consonant, vowel, consonant (CVC) word formations. Nora's method of writing with its use of phonetic spelling may be a more successful technique in Malay than English at times since English also has irregular correspondences which do not lend themselves to decoding but need

to be learnt by 'look and say' memorization. It follows that there is a compelling rationale for Nora to add visually-based strategies to her existing repertoire.

The AfL techniques make visible to teachers *how* children are processing language. The analyses imply that children would benefit from being taught explicitly about strategies appropriate to reading and writing English in contrast to those strategies that they are over-using from their dominant languages. This can be done by guided reading and writing pedagogies. For example, Fountas and Pinnell (1996), who have written extensively about guided reading and writing, describe guided approaches to reading instruction as providing a context in which a teacher supports each reader's development of effective strategies for processing novel texts at increasingly challenging levels of difficulty. The teacher works with a small group of children who use similar reading processes and are able to read similar levels of text with support (1996, p.2)

Guided reading and writing taught in small groups allows teachers to attend to children's individual needs using diagnostic information from the AfL, thus affording them very different learning opportunities than those provided by whole-class teaching. The use of guided approaches in Singaporean primary schools may enable teachers to call on bilingual children's developing metacognitive awareness about the different languages they know through the application of cross-linguistic instructional strategies. Ballinger et al. (2017) give examples of such cross-linguistic approaches as, for example, dual language books, linguistic redundancy, supportive use of the dominant language, explicit teaching about languages, translation on the part of the pupil (not the teacher), and identity texts translated from one language to another. In considering similarities and differences among languages in this small group setting, children may gain understandings and awarenesses through noticing similar and contrasting linguistic features (Schmidt, 1990). This could motivate their use of effective strategies for reading and writing each language that will enable transfer where it is productive. Teachers in

Singapore, having been through the system of bilingual education themselves and knowing the colloquial variety of English, are ideally placed to teach in such a manner, creating a virtuous cycle from diagnoses of individual needs to teaching by means of discussion in the small groups. Of broader relevance, knowledge from teaching with guided approaches would generate data useful for building our professional knowledge of multilingual children's reading and writing in the local context.

### ***The potential linguistic scaffolding of the materials***

Neither child appears able to make use of the potential linguistic scaffolding of the tasks, that is, the patterning of grammar and vocabulary in the reading text and the helping words of the picture composition. Jason seems not use the supportive sequencing of the text, for example, he omits a page despite the numbering of the rooms on each page. Nora appears not to use the helping words as seen in her multiple spellings of television. The materials were evidently chosen to be appropriate for the children, but, because there is a mismatch between the children's language and that expected by the materials and tasks, they seemingly cannot access their inbuilt support. Jason reads well below the level of the book at 87.5% of words recognized accurately. Thus, the level of the text relative to his knowledge of language and reading competence gives little chance for him to be able to access meaning (Clarke, 1988). Therefore, the patterned linguistic features of the reading scheme text, which should be supportive, are not in this instance. Jason skips pages without correction although he does correct his reading at word and sentence level.

The picture composition task is designed to guide children's writing in English as an additional language (Heaton, 1966) in providing pupils with a writing structure, ideas, and language. Like many writing tasks, the design may be based on the premise that children write best about familiar experiences; however, this premise may not accommodate the fact that

some children's experiences are in their familiar dominant home languages. Nora's dominant home language is Malay. The pictures, therefore, support her in writing structure and ideas but they apparently cannot trigger the necessary access to a reservoir of appropriate English language because of the significant disparity between the language expected by the task, shown by the helping words, and Nora's own language. This misalignment means that the potential linguistic scaffolding of the material in the form of the helping words is not supportive in practice. For Nora, the discourse level aspects of writing this task are made accessible by the sequence of the pictures and, in likelihood, her prior knowledge of the concept of narrative. It is, however, her sense of the English language code, which apparently limits her ability to write effectively at word and sentence level.

Thus, the microscopic scrutiny of these two example cases implies that both children experience reading and writing as effortful. Their language use at the specific level of the task has not yet been made automatic and fluent through practice (Tompkins, 2013; Shiffrin and Schneider, 1977). Although Jason's self-correction does show awareness and Nora manages the picture composition task well structurally, both children seem nevertheless to be struggling with learning the language code itself; as a result, they are evidently unable to make use of the potential assistance in the materials to complete the tasks appropriately and, therefore, to progress. The analyses imply that at lower levels of the primary school, especially for the sake of children for whom English is non-dominant, a pedagogic emphasis should be on building up children's knowledge of the language code (Birch, 2002; Koda 2005). Additionally, in order for the linguistic scaffolding in materials to be accessible to learners, the language level of the materials needs to be suitably matched to the learner's capabilities. This can be achieved through a precise individualized determination of a child's knowledge of and use of language processes by AfL tools such as running records and writing analysis charts.

### **Tense**

The samples suggest that both Jason and Nora's use of the English tense system is insecure on these tasks. Two factors are involved. First, tense is an aspect of technical, academic language and more complex tenses are characteristic of the grammar of academic writing rather than everyday speech (Cummins, 2000). Nora seemingly relies heavily on what she has heard and not what she has read to write this sample piece. Her evident dependence on phonetic spelling (Tompkins, 2013) means that she writes the regular past tense incorrectly. This is perhaps because of difficulty in discriminating between the two possible pronunciations of the inflected 'ed', for example, 'watched' compared with 'looked'. The sounds /d/ and /t/ are phonetic minimal pairs with only one minuscule difference in pronunciation. Furthermore, it appears that Nora cannot yet manipulate language to the extent of spelling multisyllabic words through the application of affixes and suffixes, stage four of spelling development, according to Tompkins (2013, p.356).

The second contributory and related factor appears to be the influence of SCE and Mother Tongue languages on the children's reading and writing. Jason seems not yet to have knowledge of the spoken or the written forms of the tenses in the book he reads. It is noticeable that his reading of 'looking' is read 'look' until the end of the book and that he reads 'feed' when presented with 'fed'. Contrasting English with Mandarin Chinese shows differences in the way tense is represented in the languages. Put simply, tense in English is accomplished through inflected suffixes and changes in word formation while Mandarin Chinese indicates tense by means of participles. Further, contrasting SCE with academic English suggests that the non-sounding of final consonants in spoken SCE (Ho, 2003; Bao, 1998), might affect the way children transfer their understanding of spoken language to writing, especially if they are at the stage of writing in the 'spoken style' (Winch et al., 2010). However, in learning to read and write

English, the ability to recognize and use inflections is extremely productive and generative. For instance, 'ing' can be recognized by sight when reading many different words and can help a reader decode in the first instance and develop fluency in the second. Knowledge of inflections indicating tense also gives a writer precision in word choice.

A pedagogic implication arising from this common area of insecurity in language comprehensions and use is the need to expose the children to 'book' language or the academic language of school. Reading books aloud repeatedly to children is one way of achieving this exposure and would allow children to hear the verb forms which are used in English but not in SCE. Additionally, teachers may explicitly draw attention to the use of tense in guided reading and writing sessions with children, so enabling children to notice (Schmidt, 1990) the different forms.

Thus, contrastive linguistics (Anderson and Li, 2006), applied in the analysis of data from AfL, is of great value in deepening our understanding of Jason and Nora's particular difficulties in reading and writing English. Just as important as contrastive linguistics (Anderson and Li, 2006) in analysis, are cross-linguistic strategies in instruction (Ballinger et al., 2017). As teachers apply guided pedagogies with small groups of children, they have opportunities to engage their pupils in linguistic comparison by means of dual language books and the writing and translations of identity texts. However, as Ballinger et al. (2017) note, cross-linguistic strategies should be applied in consideration of context and children's individual needs. Importantly, classes in Singapore comprise pupils from diverse linguistic backgrounds. To maintain equity and a sense of community in their classes, teachers rightly will take care not to isolate children in English lessons through the use of languages other than English which are unknown to some of the children in a class. It would be best to talk about linguistic difference in English, the

common language, and draw examples for consideration from the various other languages known by pupils in the class.

### ***Familiarity with the task***

Finally, Jason's reading suggests that he views the reading aloud for the running record as a performance or a test. It is possible that he is unused to this practice of formative assessment due to the influence of public summative assessments (Cheah, 1998). In fact, speaking is often tested by requiring pupils to read a passage aloud and then to answer related questions. Thus, not only is the task unfamiliar to Jason, but he might also be confused about its purpose as reading assessment.

By contrast, using visuals to stimulate writing is popular strategy in schools in Singapore, possibly because of a backwash effect from its use in the PSLE (Cheah, 1998). Another reason is its ease of use as a worksheet for whole-class teaching (Cheah, 2003). Nora appears to understand the procedure of the task and she can write to communicate appropriately at discourse level, using suitable paragraphing in following the sequence of the pictures for narrative. Although the composition task is likely to become familiar to Nora, this sample is her first formal attempt.

### **Conclusion**

In conclusion, the employment of AfL techniques has tremendous potential to improve teaching and learning, as such assessment tools can provide rich, detailed information about *how* individual children use language in school. The data so gathered may be analysed using contrastive linguistics as shown in this article. The analytical information may be used to the greatest effect for the individual child in small group teaching with guided pedagogic

approaches, including cross-linguistic strategies, in addition to whole-class teaching. Furthermore, the data may assist in the building of professional knowledge about how bi- and multilingual children learn English for and in the English-medium education system. This, in turn, may enable the support and development of contextually appropriate pedagogic strategies.

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