Alphabet headaches:
The bi-literacy challenge for Chinese students

by Pauline Bunce

Abstract

In Hong Kong, too many students of English have missed out on learning the fundamental principle on which all alphabetic languages are based – the fact that letter combinations represent the sounds of the language. A significant proportion of these students have learned to read English with very limited decoding (or 'word attack') skills. Their English vocabulary has largely been built up by their visual memory skills, along the same lines as their learning of Chinese characters. Nowadays, large numbers of Chinese students are attending overseas educational institutions, so it is vital that this apparent shortfall in their linguistic knowledge is addressed. This paper draws on the results of doctoral research undertaken in Hong Kong secondary schools and it makes the case that the phonological skills of Chinese learners of English should be assessed on arrival, and also systematically addressed in classroom practice. It argues that a failure to develop these skills will leave these students ill prepared for further studies or future professional reading.

Introduction

Australia has become the world's biggest foreign educator of Chinese students (Gallagher & Garrett, 2011). Chinese students currently comprise 31% of all our international student enrolments (Australian Education International, 2012). However, the influx of large numbers of Chinese students into overseas schools and colleges is a considerably under-researched development. As educators, we need to move beyond seeing our Chinese students as 'global goods' and consider their specific learning needs. For example, very little detailed research has been conducted into the highly specific, and absolutely crucial, 'bi-scriptal' English language learning challenges these learners face. This is the focus of this paper.

Chinese learners of English

Chinese students face bilingual and bi-scriptal literacy challenges quite unlike those of any other group of English language learners. Until now, the field of English language teaching (ELT) has

largely assumed that students who are literate in their first language will be able to transfer their established literacy skills to an additional language such as English. We have been told that 'we only learn to read once' by second language acquisition (SLA) experts and we have been assured that the skills and knowledge gained in first-language literacy will be of positive benefit in the acquisition of second or additional literacies (see e.g., Saville-Troike, 1976; Cummins, 2000). This might well be the case with alphabetic-background learners; however, the global presence of large numbers of Chinese-scripted learners of English presents our field with a very different pedagogical challenge.

China is now the world's largest exporter of students, providing approximately 15% of the world's total overseas cohort (China Daily, 2010). This is a relatively recent development, and one that has thus far attracted limited research attention. What happens when the skills and processes that students have learned with great success in their first language prove to be inadequate or, in the case of Chinese students reading English, inappropriate in their learning of a new language? Those of us who teach English language learners in university, TAFE and secondary schools have, generally speaking, not been trained to teach our students to read from absolute scratch, that is, 'bottom-upwards' from its phonological foundations. Rather, we routinely deal with students who are already reading. We leave the wondrous challenges of initial reading instruction to those teachers who have early childhood and primary education training.

I am a secondary-school English language teacher who has recently returned to Australia after 12 years teaching English in Hong Kong. There, I received the shock of my professional life when it dawned on me that very few of my Chinese high school students could read aloud an English word that they had not previously encountered. They would stop dead in their tracks and demand that I tell them the word. It took a while for me, as a secondary-trained teacher, to see clearly the nature of their problems. I just knew that reading English gave them 'alphabet headaches' and that they described the English script as looking like 'ugly worms' – two very telling observations, as it turned out.

First there was the Form One lesson with the simple word 'cot' written on the blackboard, that no one could pronounce. Then there was the word 'victim' that my best Sixth Former could not 'sound out' for me. However, my biggest 'a-ha moment' came when a silly poem that I had written entitled 'Typhoon Signal Number Eight' was copied down by almost all of my Form Two class as 'Typhoon Signal Number *English*'. Number English? This was absurd, yet that was how most of the students saw and wrote the unusual capitalised word 'Eight'. It was a mass-typo, a look-alike error, but it served to prove to me finally that my students were learning English words in a visual fashion – that is, in 'Chinese style' (Bunce, 2001). So, I began to experiment. I wrote in capitals. I wrote in cursive and I printed invented words such as 'nid', 'steg' and 'brompit' on the board. Sadly, virtually all of

my Chinese secondary students were unable to read the non-standard letter combinations or to 'sound out' the invented words. While an Australian friend's eight-year-old son revelled in the sheer fun of reading 'silly words', the whole notion of 'sounding out' was anathema to my Chinese students.

Several years later, I completed a doctoral degree that investigated this bi-scriptal learning challenge (Bunce, 2007). My research involved testing the phonological awareness of 778 students from a wide range of secondary schools in Hong Kong, an action-research teaching program with some of the city's most able students, along with professional development work with many local teachers of English. This project sparked a lengthy debate in the local media and it has also encouraged the development of some phonics-based reading programs in the city (Bunce, 2007). The current paper presents a brief taste of what I learned and what I did to intervene.

A completely different concept of writing

The world's writing systems vary enormously in form, but most make use of a kind of alphabet. When comparing writing systems, we can consider their orthographic distance from one another. English and French are very close, apart from a handful of accented letters. English and Russian are further apart, but word boundaries will still be obvious to readers of either script. The various Indian and Semitic scripts, while all alphabetic in nature, will present significant challenges to the English reader. Nothing, however, can compare to the orthographic distance that separates English and Chinese.

The Chinese script, sometimes written vertically, sometimes horizontally, has no obvious word boundaries nor does it carry clear and immediate indicators of sound. It bears absolutely no resemblance to an alphabet. Not only that, the Chinese script is morpho-syllabic, with each character representing a syllable-sized unit of meaning (a morpheme). In an alphabetic script, the graphical units represent tiny units of sound (phonemes). When reading an alphabetic script, we assemble the sounds together and derive meaning from the resulting combinations. In Chinese, the reader recognises meaning directly and the associated sound will accompany this realisation. Recent neuroscientific studies have revealed that the demands of Chinese reading draw on different parts of the brain from those used in alphabetic reading (Tan et al., 2003; Siok et al., 2004; Wolf, 2007). Something similar occurs with dyslexia. Dyslexic Chinese readers' processing problems have been found to occur in different areas of the brain from those of alphabetic dyslexics (Perfetti, 1995; Perfetti et al., 2007).

To learn to read English alphabetic script, we need to be taught to fine-tune our listening skills down to the level of phonemes, the smallest units of sound, which we then learn to map onto a set of

graphical symbols (letters and letter combinations). By contrast, the attainment of literacy in Chinese requires a heavy use of memory, refined hand-motor skills and pinpoint visual discrimination skills. Children can only master the 6,000 or so characters used in Chinese text by laboriously copying them over and over again until they become second nature. The cognitive demands on the human brain are very different from alphabetic processing.

Reading is not a natural human activity. We need to be taught to read, and our brains adapt to doing what we ask them to do (Shaywitz, 2001). Literacy literally shapes our brains. Significantly different patterns of energy flows between brain structures have been found between literates and non-literates, and between Chinese and English readers (Tan et al., 2003; Perfetti et al., 2007). The schooling required to read English or Chinese script has fine-tuned our neural circuits in quite distinctive ways (Tan et al., 2003; Snowling & Hulme, 2007).

English-language reading instructional practices in Hong Kong

Much of the vital cognitive neuroscientific research into the absolute basics of reading has been conducted at the University of Hong Kong over the past decade. Unfortunately, this groundbreaking research is almost unknown to the many ELT practitioners and luminaries who have worked in the very same university over the same period. I believe that reading instruction can no longer ignore the hugely significant and scientifically-based studies of the reading process that have been carried out over the past 20 years (see, e.g., Adams, 1990; Snowling & Hulme, 2007).

My research found that, in Hong Kong, there is very little systematic teaching of the absolute basics of the English reading process, such as the 'sounding out' of new words. Instead, lists of 'vocabularies' are presented, memorised and tested. One common instructional practice that reinforces the visual memorisation of words is the use of 'seen dictation'. In both Chinese and English classes, students are given a paragraph-length text to learn (i.e., memorise) for a 'seen dictation test'. When the English dictation is read out, phrase-by-phrase, the students typically race ahead and finish writing long before the teacher has finished reading. Students will leave gaps when they do not know a word and they will inevitably score zero or even minus marks when they have not memorised the passage by heart. Most school report cards in Hong Kong have a space for an average 'dictation mark' in both Chinese and English. This widespread practice completely flies in the face of the alphabetic principle of sound and letter correspondence (Byrne, 1998) and it undermines any attempts that schools might make towards teaching phonological decoding skills to students.

My research in Hong Kong led to the startling discovery that even students at the very top schools in the city – those whose photos would appear on the front pages of the newspapers at the time of the

annual examination results – had immense difficulty reading and spelling unknown words. These were students who enjoyed English and were reading the likes of *Harry Potter* and *Jurassic Park,* yet I found that they were unable to correctly spell (or to read aloud) even the simplest of nonsense words. They had learned their considerable English vocabulary by sight, by repetitive spelling practice and by the sheer power of memory. Over several long summer holidays, I introduced many of these high-flying students to English phonology and etymology via a range of age-appropriate, 'phonics-like' activities in a summer school program I called 'Word Wizards'.

My students' personal insights into their own learning make for remarkable reading (Bunce, 2007):

> I never looked inside a word before. I didn't know what is vowel or consonant before.
>
> Before I attended this class, I only know how to memorise English words with hard effort. Now I can say words slowly and separate the sounds.
>
> Before I attended this course, I had thought that English vocabulary was a massive amount of memorisation. I only knew a little about roots and suffix and almost nothing about phonics.
>
> Chinese characters are made up from different parts and you hardly know how to pronounce it if it hasn't been taught to you before.
>
> The formation of a Chinese character stress on the 'meaning' or the 'shape'. It is easy to get the meaning, but you will never get the pronunciation just by looking at it. An English word is based on the pronunciation, but you might not get the meaning by looking at it.
>
> In Chinese, we must know the word before we can say it. In writing English, we write what we say.
>
> In Chinese memory is very important. You have to really remember the sounds of the words. There are no building structures like letters in English, so there are no guesses of the pronunciation of Chinese words. You either know it or you don't.
>
> I've learnt that although I don't know the word, I can still pronounce the word by chop them into different parts or using all the sounds. You can pronounce words that aren't real! But in Chinese cannot.
>
> In English you can make up the words from the pronunciation, but in Chinese you have to remember its shape (very troublesome).
>
> Before I can't find the difference between words like 'rod' and 'rode'. Now I can hear it!

The alphabetic Chinese writing system known as Pinyin which is used to teach Mandarin Chinese in mainland China cannot, and is not, used to write Cantonese, the main Chinese language spoken in

Hong Kong. Pinyin is mainly used in the very early years of primary schooling in China, rather like the use of 'trainer wheels' on a bicycle. While the system can be of considerable help in gaining an understanding of how an alphabetic system of writing works, the presence of so many homophone-syllables in Mandarin Chinese makes it a little clumsy to use on a regular basis. However, even a brief background in Pinyin will give students from mainland China and Taiwan (which uses a different alphabetic aid to writing) a distinct advantage over the non-Mandarin speaking, traditional-character users from Hong Kong. Indeed, a landmark paper showed that Hong Kong students are possibly the least alphabetically aware of all our Chinese-background learners of English (Holm & Dodd, 1996).

What are the consequences of not being able to decode an alphabetic script?

If someone is unable to *encode* (spell) or *decode* (read) previously unknown words, what limitations will this place on their ability to study and operate in an alphabetic world? Unfortunately, while there may be an external illusion of reading, such students are really only partially literate. The consequences of this are quite alarming, as the following observations from my research attest:

1 Business students and law students, in particular, must be able to read reports and case studies aloud to colleagues, a practice that inevitably involves decoding previously unseen surnames and business locations. A report by the Hong Kong Law Society found that this was a particular weakness among the city's law students (2000).
2 Partial readers may not be able to closely follow safety manuals, operating instructions and medical advice.
3 Partial readers will not be able to take good notes in lectures. They will crave handouts and PowerPoint presentations. This is quite obvious at Hong Kong universities, and English-speaking lecturers who do not provide detailed handouts are marked down in student-feedback questionnaires.
4 Students who do some pre-reading for lectures might not recognise the spoken versions of the technical terms that they have just read.
5 Students may confuse similar-looking words – something that could be quite dangerous in medicine.
6 Students may be unable to 'grow their own vocabulary' – yet this is the all-important 'self-teaching function' of reading (Share, 1995). No school situation can ever teach students all the words that they will need in their future.
7 Poor decoders will probably not read widely nor read for pleasure, so they may have limited (or incorrect) knowledge of important and current issues.

8 On the telephone, they may not be able to jot down a name or a location without asking the speaker to spell it out for them. Then, they may not be able to make further enquiries about the person or place, as they will not be able to pronounce what they have written down.
9 Copying from a blackboard or a screen will be done slowly, letter by letter, for any unknown words.
10 The reading of text will be laboured and slow, and comprehension will suffer. These readers may not be able to work out if a text is for or against an issue. They may skip over unknown words and will need to reread frequently.
11 As travellers, they will find it difficult to use foreign (alphabetic) language phrase books, maps or atlases. They may be unable to ask directions to written destinations.
12 Many monolingual English-speaking students who have not learned to decode tend to 'hit a reading brick wall' around the age of nine, and their school performance may well fall behind that of their peers. This is known as the 'Matthew Effect' (Stanovich, 1986), in which the reading-rich will get richer and the reading-poor will fall further and further behind. In second or foreign-language learning situations, this can happen to some students in lower secondary school, or more commonly in the upper secondary years, when the demands of academic reading increase dramatically.

A practical suggestion for teaching Chinese-language students

Based on my research, one of the most important recommendations that I can make to all educational institutions in Australia that enrol Chinese students is that they include a phonological element in any on-arrival English language assessment. Even students with International English Language Testing System (IELTS) reading scores of 6 or 7 on a scale of 9 (such as my Hong Kong summer school high-fliers) may still lack the level of decoding skills required for academic reading and writing in English. How will they cope with the inevitable flood of 'new words' that they will meet every day? Even native English speaking university students find this a challenge.

The fastest way to assess a person's phonological awareness is to administer an informal five-or-six item 'pseudoword test' – either by dictation (encoding) or by reading aloud (decoding). Any set of half a dozen invented words, some single-syllable, some multi-syllable, will reveal a student's fundamental ability to operate in an alphabetic code and deal with the masses of new vocabulary that they will face. Failure to do so efficiently, or a complete non-response, would suggest that they require an intensive, age-appropriate 'phonics and word study' programme (such as 'Teaching Handwriting, Reading and Spelling Skills', or THRASS). The benefits will be felt in the student's reading, writing, spelling, listening and pronunciation skills.

Conclusion

The recent phenomenon of large numbers of Chinese students travelling abroad to study the English language presents the field of English language teaching with a completely new, and possibly unforeseen challenge – and it must be recognised as such by the profession. It is time for English language teachers to bring themselves up-to-date with recent scientific studies of the reading process, and to learn a great deal more about the 'bottom-up' nature of this complex neuro-cognitive process. There should be no more 'skip and guess' in reading lessons. A heightened awareness of what the reading process involves, and the steps that are needed to make its acquisition firm and efficient, will have an enormously beneficial impact on our sizeable body of non-alphabetic, Chinese-background learners.

If our students cannot decode unknown or unfamiliar words, we cannot say that they have truly learned to read.

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