Spelling it out!
Accounting for Spelling Difficulties for Arab Learners of English

Helen Bowen
Helen Bowen is a member of the English Faculty in the Academic Bridge Programme at Zayed University (Dubai), UAE. She has previously taught EFL and teacher training courses in Italy, UK and Oman and holds a master’s degree in TESOL from Aston University. Since coming to the Gulf 10 years ago, she has developed a special interest in the spelling problems of her learners.
The irony of this quotation is rich. Teachers of English in the Gulf can be frustrated by the poverty of their Arab students’ spelling and struggle to find possible causes and remedies. The more experienced can attempt pedagogic explanations and those who know more about the Arabic language offer explanations based on the contrast between Arabic and English. Most puzzle can over the fact that mistakes are often illogical, with few discernable patterns, and that errors persist, sometimes to the point of fossilisation, despite frequent correction.

There are many contradictions in students’ spelling and no one individual tends to exhibit just one type of spelling behaviour. In ‘modern children’ the opposite inversion may be written by the same learner. It is not unusual to find different variations of a word in the same script, as with ‘place’ written as pleac and pleca in close proximity, showing the right letters but no consistent positioning. Other students have written the same word as palac, thereby splitting the consonant blend with a vowel to make it easier to pronounce, in a process called epenthesis, or as ‘palace,’ causing obvious confusion.

It would appear that our students often do not notice patterns in English words and word parts, and have not been trained to do so. Bowen (2008) investigated the teaching and learning of spelling in the UAE and Oman. This paper will review relevant literature on the subject and summarise Bowen’s analysis of 250 errors collected from students’ written work, in an attempt to identify any patterns to them. It will suggest teaching strategies and activities to engage learners in developing as more thoughtful spellers.

The Literature

Arabic

Arabic is considered to be diglossic, meaning that the spoken form is very different from its literary form which is “the language of books and school instruction” (Abu-Rabia, 2000, p. 147), often resulting in problems for Arabic readers in their own language. It follows that when Arabic speakers learn English, they have not previously learned to relate their spoken and written languages, unlike English where the written form is a representation of the spoken language.

Arabic Morphology

Arabic is a derivational, consonantal language in which a base of usually 3 consonants forms a root, from which other semantically linked words are derived with the addition of vowels and other consonants (Abu-Rabia, 2007). Thus, the derivational root of k - t - b forms kitaab = a book, maktab = office, and kaatib = office clerk. Prefixation, infixation and suffixation add information about person, number, gender, time and possession. Hence kitaab becomes kitaabi (my book), kutub (books), and so on.

Arabic Orthography

Only long vowels are represented as graphemes in text, as the three short vowels are represented by diacritic marks above or below consonants. They are usually only included to help early or poor readers with pronunciation (Abu-Rabia, 2007). However, short vowels are not written in literary Arabic and crucially, “adults and good readers...read the consonants and guess the
vowels” (Abu-Rabia, p. 94). Arabic readers rely heavily on phonological skills to disambiguate a word from others with the same consonantal root.

Thus Helen can be written unvowelised as Hln, with long vowels as Heeleen, or vowelised with the shared diacritic for the short vowels /e/ or /i/. In this last case, as /le/ and /lie/ are allophonic, the pronunciation could result in Helen, Helin, Hilen or Hilin. This exemplifies how much guesswork goes into the ‘reconstruction’ of written words in Arabic, which is clearly not transferable to English. Apart from small differences between British and American spelling, the writing system to which students are exposed is standard and the only variations they read are their own.

**Word Recognition Problems**

Poor letter and word recognition have been identified as major problems for Arab speakers in reading in Arabic by Abu-Rabia (2000, 2007), and in English by Brown and Haynes (1985), Ryan and Meara (1991), and Hayes-Harb (2006). The focus of Arabic readers on consonants and the absence of written vowels in Arabic text can frequently lead to inaccurate guessing both in Arabic and English.

A system which encourages the reader to focus on the consonantal framework of a word does not allow sufficient discrimination between words when it is transferred to the lexical system of English, where consonants are not the only key signals for a reader (Ryan & Meara, 1996). Because L1 Arabic learners may transfer word recognition patterns, they are more “conspicuously inaccurate in handling vowels” than other language groups (Ryan & Meara, 1996, p. 1). They can be prone to ‘vowel blindness’ in which they ignore “the presence of vowels when storing vocabulary” and exercise seemingly “indiscriminate choice as to which vowel to use when one is needed” (Ryan, 1997, p. 189). “Arabic speakers may have an additional problem... in that vowel blindness may result in poor pronunciation” (Milton & Riordan, 2007, p. 123). If good spellers need dual visual and phonological strategies, then L1 Arabic learners are losing out on both.

Also, Arabic, unlike English, is entirely phonetic, and a comparison between the two sound systems can reveal where some transfer problems originate. Ibrahim (1978), Kharma and Hajjaj (1989), Smith (2001) and others give examples of typical problems.

**Stages of Reading and Spelling Development**

Many researchers, including Gentry (1982) and Ehri (1997), have suggested stages in the development of reading and spelling in English, with learners progressing from reliance on visual approaches, to full integration of visual and phonological strategies. In Ehri’s first, ‘prealphabetic’ stage, children rely on visual cues, not yet realising that the alphabet represents sounds. Her second, ‘partial alphabetic’ stage, elsewhere known as semi-phonetic, is when learners start to use long vowels, but other vowels and consonants are less known. Words are read by remembering them or by guesswork, and a learner’s memory for spelling lacks detail. Of particular relevance here is that “they have difficulty detecting and segmenting words into phonemes, and they do not know how to represent all the sounds with letters, particularly vowel sounds” (Ehri, 1997, p. 254). These characteristics show close similarities to L1 Arabic students’ reading and spelling behaviour, and will resonate with their teachers.

Development through these stages is cumulative, so to operate at the third, ‘full alphabetic’ stage, “students need to be able to segment words into constituent phonemes. Also, they need to know conventional grapheme-phonemic units, particularly how vowels are symbolized with letters” (Ehri, 1997, p. 255).
Learning Spelling

There are two mechanisms for learning words. Learners store whole words in their memory, which is what usually happens with familiar words "because the forms have been processed on previous occasions and remembered" (Ehri, 1997, p. 239), or they learn written sound-spelling correspondences for word encoding. Teaching must help both, for permanent learning. "The more cognitive energy a person expends when manipulating and thinking about a word, the more likely it is that they will be able to recall and use it later" (Schmitt & McCarthy, 1997, p. 3). However, the purpose of learning should not be solely for declarative knowledge as with traditional spelling tests based on short-term memorisation. The teaching of spelling strategies involves procedural knowledge and must acknowledge all the different processes involved and the different learning styles of students. Where students follow a phonological route to spelling, they must learn to check with visual word strategies, and conversely, visual spellers need to learn to segment and sound out words.

L1 English Teaching Methods and Arab Learners

L1 English children learn to speak and later they are taught to read and write using methods which include the ‘Whole Word’ and ‘Look, Cover, Write, Check’ approaches, which are essentially visual. However, today, English L1 primary schools give considerable attention to literacy using the synthetic phonics approach. Published phonics courses and national curricula have a core syllabus to develop phonological and orthographic processing by teaching students about syllables and to see, hear and make sounds and blends in words. Children learn “to go letter-by-letter, assigning a pronunciation to each letter and then blending the individual letters together” (Cunningham, 1995, p. 185).

There are considerable problems with the wholesale adoption of the synthetic phonics approach with L2 learners. Crucially, L1 children have an acquired store of vocabulary and have largely mastered the spoken language, so they already know how to pronounce the words they are learning to read and spell. L1 English children are also ‘syllable-aware,’ even if sub-consciously, because they start reading and spelling single-syllable words at school. Conversely, older ESOL learners must learn all the language skills simultaneously, as well as learn an adult vocabulary of multi-syllabic words.

Therefore, it will be recommended here that the principles of phonics teaching should be ‘borrowed,’ but with content and materials appropriate to the age and language needs of young Arab adults. Key to this approach is segmentation. Breaking down longer words into single syllables provides smaller and easier spelling units and enables the learning of spelling strategies. Only by teaching L2 learners to do this, can teachers simulate what happens for early L1 learners.

Student and Teacher Surveys

Evidence from the 63 teachers surveyed (Bowen, 2008) revealed that 94% of them do not teach spelling with a dedicated syllabus in mind. The majority use error correction as their principal method of improving students' spelling. Approximately 80% of the teaching of spelling centres on discrete word formation and grammatical patterns as they arise in grammar and vocabulary lessons.

Also, the 53 students who answered a questionnaire overwhelmingly confirmed that, although they had frequent spelling tests (79%), they had no spelling instruction at school (91%) with no work on syllables or vowels. Usually the only learning technique they had been exposed to was rote learning.
A battery of other diagnostic tests (including those outlined later in this paper), investigated students’ spelling behaviour, especially whether they recognised (in)correct spelling, and whether they used visual or auditory strategies. These confirmed that students possess few, if any, spelling strategies and that they pay insufficient attention to word form when looking at words, especially familiar words.

I don’t give myself time to see the words carefully and how it’s spelled, especially with words that I know before. I skip it as a word I know then I don’t remember the spelling of words which I usually use. (Omani student 1)

There is strong evidence that the majority of students used visual memorisation, as indicated by,

I learn spelling by see the words then I forgot them. (Omani student 2)

Tests showed that students spelled phonetically or visually but without metacognition. They rarely use dual approaches, either in the initial encoding of words or in subsequent checking. They may not know how to correct mistakes indicated by teachers, and often exchange one erroneous form for another. Spelling errors commonly centre around difficulties with vowels, especially short vowels.

Despite years of learning English, many students appear to remain unaware of these specific problems.

**Error Analysis**

This analysis was conducted in an attempt to clarify the error patterns of L1 Arabic learners of English. A database of 250 random spelling errors was collected over approximately three years by several teachers from hand-written pieces of work, from a large number of different students in both the UAE and Oman. The teachers also recorded the intended word, understood from the context. Because the cause of these errors was unknown, it is unclear whether they were due to faulty knowledge or to temporary slips, so to follow the example of Swan (1997), error and mistake will be used “in free variation” (p. 156) in the discussion that follows.

**General Patterns**

Some spellings were too irregular and some inversions of letters within the word made it hard to be specific about the exact nature of some errors. Also, many words were mono-syllabic, such as shaep (shape) and twon (town). Arguably, it was surprising how many mistakes occurred in short, familiar words, which might indicate that little attention is given to correct English spelling.

**Phonetic Spelling**

Judgements were inevitably subjective, but phonetic attempts appeared to account for only 48 (19%) of the 250 words. Spellings such as *deleshous* (delicious) and *serias* (serious) successfully suggest the target word. In a separate intelligibility test, 25 native English speakers, all non-teachers, were shown a variety of misspelled words from the database (Bowen, 2008). Many were unintelligible to the majority of respondents, but phonetically spelled words were the most recognisable, including both the examples above. Conversely, the computer spellchecker is less effective with this type of mistake.

Students who spell phonetically need to learn the correct visual correspondence to sounds. At times, they may over-generalise other patterns which produce similar sounds, as in *teature* for teacher. These students are at the partial alphabetic stage described by Ehri (1997).
Right Letters Wrong Place (RLWP)

The most significant pattern to emerge was one which does not feature in any of the literature reviewed. This phenomenon has been called ‘Right Letters Wrong Place’ or RLWP (Bowen, 2008). As the term suggests, every letter is correct but with inaccurate placement. The most likely explanation of this is that learners take visual ‘snapshots’ of words, but when it comes to recall, the phonetic information necessary to position the letters correctly is lacking.

Of the 250 words, 92 (37%) fell into this category which might suggest that the number of visual spellers in this study was almost double that of phonetic spellers. Such errors are characteristic of the partial alphabetic stage because of the presence of the correct letters, but not sufficiently controlled for the full alphabetic stage (Ehri, 1997).

Strikingly, of the 92 words, there were 60 examples of direct inversion of adjacent vowels and consonants. The reasons for this are unclear, especially with ti (it). One possibility is that of left-right directionality, but while this cannot be dismissed as a cause, only 25% of teachers and 8% of students surveyed believed this to be a problem and tests by Randall and Meara (1988) and Ryan and Meara (1991) also tended to dispute it as a problem. The current error analysis showed that whole words are rarely inverted but only pairs of letters.

Another possibility is that the inversion may be an attempt to split a consonant blend to ease pronunciation. This appears to be true in 19 cases, such as siklls (skills) and calss (class). However, there were also 20 cases of more simple CVC (consonant-vowel-consonant) patterns being inverted, as in viatl (vital) and mboile (mobile). Common VCC endings such as ‘ern’ and ‘ing’ were also changed, as in modren and traininig. Whatever the reason, new letter combinations often disrupt syllable breaks and add to the consonant load, rendering the word harder to say, as with blcok (block), lending weight to the argument that these spellers were using visual, not phonetic, approaches.

Sounds

Of the 250 words, 198 (79%) had a different sound from the target word. Of these, 32 had significant pronunciation problems in English. Examples included tcahers (teachers) and scuk (suck).

Errors resulted in an extra syllable or sound in approximately 45 cases, such as in frenid (friend). Loss of a syllable or sound occurred in 38 words, as in educatal (educational). Clear examples of transfer of Arabic patterns were found in 25 cases, especially with omitted vowels, and thus syllables, as in blotion (pollution), schdle (schedule) and rpot (robot). It was evident that the spellers of the examples above did not sound out these words.

Vowels and Consonants

Vowel mistakes featured in 89% of the words (223/250) with consonant mistakes in 43% (107/250). The contrast is evident in Figure 1. This shows that 57% of words had the correct consonants in the correct order, even if the vowels were incorrect or a consonant was inverted with an adjacent vowel. This distribution is entirely compatible with the vowel blindness findings of Ryan and Meara (1996).
Mistakes with Vowels

The main patterns of errors with vowels can be seen in Figure 2. Interestingly, of the 223 words with vowel mistakes, 87 (43%) had the correct vowels in the wrong place, such as *hostiry* (history) and *fainlly* (finally) and *cema* (came) which tend to render the word unrecognisable to readers. This left 136 with missing, extra or incorrect vowels.

Missing vowels (16%). The 35 examples possibly indicate the transfer of Arabic non-vowelisation patterns. Another explanation is that students omit weak or silent vowels as in *contrid* (controlled). However, long vowels (‘ea’ in *tcahers*) may also be omitted. Missing vowels often result in the loss of a syllable, as with *tens* (tennis) indicating the lack of phonetic strategies.

Extra vowels (11%). Examples such as *partaner* (partner) suggest epenthesis, an attempt to make the word easier to pronounce. However, there were also cases of the gratuitous addition of a vowel, such as in *folu* (full) where no phonetic processes are indicated.
Incorrect vowels (30%). The only certain conclusion here was the lack of obvious patterns. The apparent indiscriminate use of vowels is the strongest evidence that students know little about grapheme/phoneme correspondences. There was a clear problem with short vowels as predicted, especially ‘e’ and ‘i’ which were often used interchangeably, although even this pattern was not entirely regular. As expected, long vowels were less problematic than short vowels but these were also used irregularly. Some examples indicated that spellers were writing the sound of the name of the letter, as with ‘e’ in *laze* (lazy) and *onle* (only). This is a characteristic of L1 learners in the very first, prealphabetic stage (Ehri, 1997).

Only by learning vowel sounds and patterns with their graphic correspondences, will students appreciate the level of accuracy demanded with English vowels.

Mistakes with Consonants

Of the 107 words with consonant errors, only 6 had the correct consonant in the wrong place, such as *mucis* (music) and *melt* (metal) leaving 101 with wrong, missing or extra consonants. (See Figure 3.)

Wrong individual consonant (30%). Confusion was found between b/p, s/c, sh/ch, j/g, and f/v where the second in each pair does not exist in Arabic. Most noticeable were the 16 errors with ‘b’ and ‘p’ as in *berfect* (perfect) and 6 reverse errors, where spellers were possibly over-compensating or guessing, as in *rappeshe* (rubbish).

Wrong pattern/rule (21%). There were some problems with word formation patterns as with ‘+tion’ (3), ‘+ture’ (2), ‘+ck’ (3), ‘wh+’ (4) and ‘+y’ (7) among others. As expected, ‘+le’ was also a problem, as in *empasiball* (impossible) and *letel* (little). However, because the negative ‘n’t’ is so common in English, *deonst* and *dones’t* were harder to explain. Double consonants were either omitted (18 errors) or used wrongly (9) as in *bussnices* (businesses). Some errors may result from misuse of an analogy, as *panasell* (pencil) and *empasiball* (impossible) but other doubles are inexplicable, such as *cillos* (close) and *oil* (oil).

Extra consonants (15%) / missing consonants (11%). Some of these could be careless slips, but most are illogical and would have been picked up by segmentation or sounding out strategies.
The assumption has to be made that words were spelled visually, and that no auditory checking took place in errors such as *holdidays* (holidays), *sholuld* (should) and *commont* (common) in the first group and *tourim* (tourism) and *imoprant* (important) in the second.

**Summary of Error Analysis**

The most significant pattern to emerge was that, although more than 60% of teachers surveyed believed that students spell phonetically, such errors accounted for only 19% of the database. Conversely, if the hypothesis that RLWP is evidence of visual spelling, then 37% of spelling errors suggest that these approaches were used twice as often, although only 8% of teachers believed that their students rely on visual memory.

Far from spelling phonetically, the majority of students seemed to lack phonetic spelling strategies, which was borne out by 79% of errors, including inversion, incorrect letter choice or the gratuitous inclusion of rogue letters, which change the sound of target words. Sounding-out strategies and knowledge of phoneme-grapheme correspondences would have prevented many of the errors analysed here, especially of the many vowel errors which confirm the idea of vowel blindness (Ryan & Meara, 1996).

**Teaching Spelling**

As seen throughout, indications are that students do not know how to learn spelling and that insufficient teaching is taking place. Rather than directly teaching spelling, several teachers expressed their belief that the more students read, the more they improve their spelling. However, the reverse was argued convincingly by Perfetti, Rieben, and Fayol (1997):

> reading by *itself* will not dramatically improve spelling because reading does not practice the full orthographic retrieval process demanded by spelling. Moreover, it is spelling itself that is most effective at improving the quality of the word representation. Practice at spelling should help reading more than practice at reading helps spelling. (pp. 30-1, original emphasis)

The literature and the results of this study give compelling evidence that teaching students to see and hear word parts must be an explicit part of learner training. If L1 English children have to be taught to do this, then L2 learners cannot be expected to do it without help.

**Recommendations for the Teaching of Spelling**

Activities must be engaging and memorable and can be tailor-made to suit students and their general and specific problems. Teachers must aim to improve how students notice and then store the spellings of words with word-making and word-breaking activities. To achieve this, visual and auditory materials must be included to encompass all spelling strategies and to accommodate different learning styles.

**Segmentation**

As stated earlier, breaking down words into syllables provides smaller and easier spelling units and enables the learning of spelling strategies. Only with segmentation, can students learn that every syllable must have one vowel sound. A vowel sound may be represented by a combination of vowels or by the consonant ‘y’, so *mad*, *made* and *maid* all have a single vowel sound and
therefore one syllable. Hence *cam+er+a* has three vowel sounds and thus three syllables, and *noise* has one syllable but *nois+y* has two.

Every opportunity to help students to notice syllables must be taken, for example, by grouping words with the same number of syllables, finding words within words (*yesterday* → *yes/day*), breaking words down into syllables (*wonderful* = *won+der+ful*), and making longer words by combining syllables (*in+ter+net* = *internet*).

Segmenting words into syllables helps to redress the problem of the solely visual or auditory learner by combining both seeing and sounding-out activities. This facilitates the isolation of individual sounds for phoneme and grapheme practice, as well as the contrastive practice of vowel sounds between each other and in contrast to Arabic.

**Phoneme/Grapheme Correspondences**

Vowel blindness is clearly a problem for L1 Arabic learners of English, but ‘vowel deafness’ should also be recognised. It is the two combined which cause inordinate confusion with vowels, as the errors themselves showed. Because of diglossia and the fundamental differences between colloquial and literary Arabic, students may not link the spoken and written forms of English. Phoneme/grapheme correspondences must be taught, and, most importantly, short vowels should be singled out for extensive practise.

Pictures, posters, tables, lists, board work, games, matching and manipulation activities can be used to provide the necessary visual elements. The use of colour to highlight key features, such as vowels, is helpful. Students must learn phonetic coding by repetition of sounds, and auditory discrimination by contrasting them (*pin/pen, man/men*). Rhymes, chants and alliteration such as ‘The fish is in the tin and the tin is in the bin’ can all provide enjoyment as well as enhancing learning. For kinaesthetic learners, any matching of graphemes and phonemes offers opportunities for the manipulation of cards, lists and so on. Letters, syllables, blends and words can be physically grouped or sorted, and games to match sounds or words such as Snap! or Pelmanism (also known as Concentration) are easily made.

Materials development requires an investment of time and effort but provides significant returns for students and teachers alike. A shared teaching room where teams of teachers pool resources would be ideal.

**Teaching Patterns and Analogy**

In the past, some teachers have relied too heavily on spelling rules of low-frequency words and their numerous exceptions such as *bough*, and *cough*. However, teaching common, simple spelling patterns, such as the silent ‘e’ is essential.

**Copying**

L1 English primary schools commonly use copying and left-right tracking activities. ESOL teachers worry about using childish activities, but students quickly learn that this practice helps them to notice their mistakes and gain knowledge about themselves as spellers.
Reading Aloud

Reading aloud has been disregarded as lacking pedagogical merit in TESOL, but contemporary writers have attributed this to its misuse rather than its use (Gibson, 2008). Reading and spelling problems may both result from, and in, poor pronunciation, so reading aloud can be an excellent diagnostic and teaching tool. It can be used to check learners’ decoding of grapheme-phoneme correspondences, by forcing “readers to make and practise these connections” (Gibson, pp. 30-31). Asking students to read out their own mistakes, such as enternet, Sutlan and reanding, is revealing.

Correction

Teacher and researcher attitudes to correction are varied and emotive. Over-correction can be counter-productive but giving feedback to facilitate the learning process is incumbent on any teacher. However, if students have no spelling strategies, they may not know how to correct, and teachers must check that one error is not simply replaced by another. This might be an argument for re-writing the correct version for students to copy. Teachers need to check that students do not merely glance at corrected spellings, thereby reinforcing the visual approach which may have lead to the mistake in the first place.

Testing

Testing is an extensive area of research, but arguably testing spelling is a valid activity if used to test spelling skills rather than short-term memorisation. Testing should involve recognising correct spelling as well as producing it, with tasks including editing; identifying correct spellings, or same or different spellings; counting syllables; reading aloud; and dictations. Three easily produced tests are:

1. Headword matching. Students circle the correct spelling.

<table>
<thead>
<tr>
<th>difference:</th>
<th>diffrent</th>
<th>difference</th>
<th>diffrence</th>
<th>differenc</th>
</tr>
</thead>
</table>

2. Same or different? Pairs of same or different words (interest/intrest) are shown in succession in a presentation, for students to discriminate. It is useful to include a blank slide between words so that spelling changes cannot be seen.

3. Word-attack test. Spelling of pseudowords or unknown words eliminates memorisation, concentrating only on sound to letter encoding. Care must be taken to invent or use words with a clearly defined syllable structure and with unambiguous sounds, especially of short vowels, or with analogies to known words. Each syllable must be pronounced clearly, with equal stress, and can be repeated many times.

All of these tests add a cognitive dimension to spelling and the backwash effect helps students to learn how to learn.

Conclusion

Research shows that many of the spelling problems in this paper are peculiar to L1 Arabic learners of English. Many reasons have been discussed but lack of explicit teaching of spelling appears to be a prime cause. Many English teachers admit to lack of awareness of how to teach it.
I confess I have been guilty of the worst kind of ‘teaching’: telling students that they are not very good at something and then not being able to really help them to improve. Colleagues expressed similar feelings of helplessness and guilt. (Stirling, 2003, p. 2)

With more research now about learners and learning styles, teachers cannot simply teach discrete language items mechanically for memorisation. Effective intervention involves the teaching of spelling strategies to help learners become more knowledgeable spellers. It involves engaging students in the metacognitive process of learning how to learn to spell, to check and to correct. It involves enabling students so that they feel more confident in their abilities as spellers. Teachers can help students attempt to overcome some of their difficulties, and they fail them if they do not do so.

References


