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Bulletin

Spelling: past, present and future

From the President

Anne Castles

In this issue, we focus on spelling. I'm very pleased about this, because spelling often feels like the "poor cousin" of reading. The processes involved in learning to spell have not received anything like the degree of research attention as those involved in learning to read, and spelling difficulties do not attract the same level of concern from teachers, parents, and clinicians as do difficulties in reading.

Why might this be the case? One widespread impression seems to be that a spelling problem is easily dealt with – just use the spell checker! But, as we well know, the spell checker doesn't fix the many spelling errors that involve producing another correctly spelled word (for example, the ubiquitous their/there confusion). There also seems to be a sense that being a poor speller is just an annoyance rather than a condition that will affect a child's future or their access to knowledge, education or employment. But this is not so. To cite just one example, in a 1991 article in Business and Professional Communication Quarterly, researchers Robert Schramm and Neil Dortch report on a survey of 142 recruiters from a range of companies. The recruiters were asked about the aspects of resumes that influenced their interest in interviewing a prospective employee. Over 90% of the recruiters responded that a resume with more than one spelling error would lead them to be disinterested in a candidate. Acquiring basic spelling and writing skills is important, and arguably more so in our modern era of texting, tweeting, and social media.

Another reason that spelling is important is that knowing the precise spellings of words helps people to read them. In research reported in Scientific Studies of Reading in 2017, Gene Ouellette and colleagues trained undergraduate students to improve their spelling of difficult words. The students' word reading speed was then measured for these same words. The researchers found that the words that improved in spelling accuracy were subsequently read more rapidly than the words that did not show improvement, providing direct evidence that the quality of orthographic representations, as indexed by spelling, is causally related to reading efficiency. Findings such as this have important implications for the remediation of both reading and spelling difficulties: we must remember not to overlook spelling interventions as a potentially valuable component of our toolkit when working with children with learning difficulties.

Reading and spelling are closely linked, but also draw on different skills and processes. At the most basic level, spelling is a production task while reading is one of recognition. That there are differences in the demands of reading and spelling is evident from the existence of a small but distinct group of individuals who are unexpectedly poor spellers: their reading falls within the normal range, but they fall well below average on measures of spelling. By closely studying children who show this profile, we can learn more about which skills are common across reading and spelling, and which skills are distinct.

I hope that you find the articles in this issue illuminating and informative, and I further hope that this focus on spelling will stimulate more interest in, and attention to, this important domain of learning.

LDA's president, Dr Anne Castles, is Research Chair in the Department of Cognitive Science at Macquarie University. Her research has a particular focus on reading development and developmental dyslexia. Anne is Chair of the NSW Centre for Effective Reading and a steering committee member of the Australian Brain Alliance. Anne has been a member of the LDA Council since 2009 and is on the editorial board for five academic journals.

Council notes

Wendy Moore

LDA AGM

LDA Members and guests are invited to attend LDA's AGM and the conferring of Awards on Saturday, 22 September.

Time: 1.00–3.30pm, AGM and Award Winners' acceptance addresses

Place: Treacy Centre – 126 The Avenue, Parkville, Melbourne

Afternoon tea will be provided – please RSVP to Kerrie McMahon, LDA Administration Officer by email: ldaquery@bigpond.net.au.

LDA Awards

LDA is very pleased to announce the recipients of the 2018 LDA and AJLD Awards, including the inaugural Rosemary Carter Award. These awards are designed to recognise outstanding work in the field of learning difficulties. They are open to both members and non-members of LDA. This year's awards will be presented at the LDA AGM on September 22 at the Treacy Centre in Melbourne.

For more information about the awards, application processes, and previous winners, visit the Learning Difficulties Australia website.

AJLD Eminent Researcher Award

Professor Kate Nation is Professor in Experimental Psychology and Fellow of St. John's College at Oxford University in the UK. Professor Nation's research is concerned with the psychology of language, especially reading and its development. She is interested in how children learn to read words and comprehend text, and more generally, the relationship between spoken language and written language. Alongside her research on typical development, Professor Nation studies language and cognitive processes in children with developmental disorders that impact on language and literacy development, including language impairment, autism and dyslexia.

Mona Tobias Award

Alison Clarke is a speech pathologist from Melbourne. She is a passionate advocate for evidence-based practice and developed the website Spelfabet. Alison helps parents, teachers and others incorporate this evidence-based approach into high-quality initial instruction and early intervention through the provision of resources and timely advice with her blog and engaging videos that demystify what it means to teach reading, spelling and writing effectively.

Bruce Wicking Award

Ray Boyd is the principal of West Beechboro Primary, a high performing school in Perth. Through his enduring commitment to teacher-directed instructional practices and evidence-based literacy instruction students, staff at West Beechboro Primary School ensure students are not 'defined by their post-code.' Because of Ray's commitment effective literacy instruction, students who might otherwise have experienced difficulties learning to read achieve success.

Rosemary Carter Award

Fay Tran is the inaugural recipient of the Rosemary Carter Award. Fay is an outstanding consultant member who has contributed to the field of learning difficulties through her work with students as a learning support teacher at Geelong Grammar and following her retirement as an LDA Consultant providing private tuition. Fay's commitment to evidence-based practice saw her resist pressures to abandon the phonics approach for the teaching of initial reading in the 80s and 90s, and she was successful in ensuring that direct teaching of phonics was maintained at her school. Fay is the author of Teaching Kids to Read, and through her website Learning2Read she provides a wealth of information and resources for parents and teachers.

Professional Development

This has been a very busy year for LDA organised professional development events. In May, Dr Judi Humberstone presented a very useful session on dyscalculia and the difficulties students experience in developing mathematical understandings. Then in June, Jenny Baker delivered a very well received full day session on developing sentence complexity in written expression. Attendees at both sessions walked away with new knowledge and insights which they will be able to apply straight away in their work with students.

The packed LDA professional learning schedule has two more exciting events coming up with sessions in Adelaide, Melbourne, Perth and Sydney.

Kate Nation - Reading and language comprehension difficulties: research-practice links and applications for the classroom

Melbourne: Friday 21 September 2018 Treacy Centre, 126 The Avenue, Parkville

Adelaide: Monday 24 September 2018 Education Development Centre (EDC), 4 Milner Street, Hindmarsh

Sydney: Friday 28 September 2018 Mantra Parramatta, cnr Parkes St & Valentine Avenue, Parramatta

LDA is honoured to present Kate Nation – Professor in Experimental Psychology and Fellow of St. John's College, Oxford, Director of ReadOxford, Partner Investigator ARC Centre for Excellence, and LDA's 2018 Eminent Researcher Award winner – in Melbourne, Adelaide and Sydney. Kate will consider the complexity of reading by constructing meaning from print, highlighting why children may struggle to understand what they read, and discuss evidence-based interventions for children with poor reading comprehension, considering implications for the classroom.

Professor Nation's work is of direct relevance and critical importance to everyone working with children with language and literacy difficulties. Registrations have been strong for these workshops and we are expecting that they will generate a lot of interest and discussion.

Spelling: Beyond the Alphabetic Principle

Perth: Saturday 20 October 2018 Edith Cowan University Lecture Theatre building 10, room 131

Sarah Asome will present a systematic explicit evidence-based approach to teaching spelling, focusing on teaching spelling as a 'process', based on the structure of the English Language including phonology, syllabication (structural analysis) and morphology. Explanatory session notes and hands-on practice will be provided. Participant will learn:

- basic procedures for spelling regular 1-syllable words based on sound-symbol relationships, (phonology)
- basic procedures for spelling irregular words,
- spelling rules for 1-syllable words,
- basic procedures for spelling multisyllabic words on syllables, (structural analysis),
- spelling rules for adding suffixes, (morphological principles).

Sarah Asome is a dyslexia specialist and the Learning Support Leader at Bentleigh West Primary School in Victoria. She has been instrumental in leading change at BWPS, which has led to a significant increase in their students' literacy levels, with the 2018 NAPLAN results now placing BWPS as a high performing school. Sarah also continues to support many colleagues state and nationwide in implementing evidence-based literacy instruction in their schools. In 2015, Sarah Asome was awarded 'Outstanding Primary Teacher in the VEEA awards. Sarah is featured in "Outside the Square", a DVD resource for teachers, and in 2017 appeared on Insight – 'A teacher Who Changed My Life'. Sarah regularly presents at state and national conferences in relation to literacy and dyslexia. She is an inspirational ball of energy and passion.

News from the Website

The LDA website provides members and those interested in supporting students with learning difficulties with a treasure trove of information. Some new functionality has been added to the website recently.

LDA Bookshop

The new, revitalised, LDA Bookshop was launched in late May and has got off to a great start. The online bookshop features a carefully curated selection of books for LDA members and visitors, founded on evidence-based research, which bridge the gap between research and practical teaching resources.

The LDA Bookshop is regularly updated with new resources and recommendations from LDA members are welcomed. If you come across a book which you believe will be helpful to other LDA members, then please let us know via the Contact page on the LDA Bookshop website. All suggestions will be reviewed and if aligned with the bookshop's guidelines, they will be added where we can offer them to LDA members at a reasonable price.

To see for yourself and to make suggestions, click on the LDA Bookshop link on the home page of the LDA website.

Can we teach Daniel to spell?

Jennifer Baker examines the importance of mental graphemic representations (MGR) and rapid automatic naming (RAN) through a case study of a typical bright young boy who really struggles with spelling.

"Daniel, which of these two words is spelt correctly?"

freind or friend

"I'm sorry Jenny, I don't know; they both weigh the same in my mind!"

Daniel is 11, and this is how he explains the fact that he has not established a robust mental graphemic representation for the word "friend" within his orthographic memory. He cannot "call it up" and visualise what it looks like. He cannot select which representation is the correct one – both words "weigh" the same in his mind!

What does Daniel's profile look like?

Daniel is a very bright young boy with high verbal language skills. At the word level, his spelling and reading are all well below average and this has impacted on his functional literacy skills, particularly in written expression where he is operating at the 12th percentile (on the Oral Written Language Scales (OWLS) Written Expression Subtest) (Carrow-Woolfolk, 2011). Reading comprehension is just within average range, boosted by sophisticated world knowledge and intrinsic linguistic capability but hampered by poor single word accuracy and fluency.

How does Daniel process sounds and letters?

Daniel is somewhat typical of the children we work with in our clinic. He has a profile of strong phonological awareness but very low rapid automatic naming (RAN). Maybe this recurring profile is suggestive of the rigorous phonological awareness (PA) training that children in Western Australia receive in the junior primary years. Maybe the children who are now most at risk for reading failure are the ones who have attained average PA skills through classroom programs, but whose RAN remains weak (as there are no reliable evidence-based methodologies to improve RAN exclusively).

On the Comprehensive Test of Phonological Processing (CTOPP-2) (Wagner, Torgesen, Rashotte and Pearson, 2013), Daniel's profile is asymmetrical, unbalanced enough to force him into an over-reliance on the phonological route to reading and spelling acquisition, thus not allowing him access to the orthographic route. His results show that:

- Phonological awareness is at the 97th percentile
- Phonological memory is at the 50th percentile
- Rapid automatic naming (Symbolic: letters and numbers) is at the 9th percentile
- Rapid automatic naming (Non-symbolic: colours and objects) is at the 12th percentile

What does this mean in terms of his literacy development?

In term of his literacy development, this means that in the early stages of spelling and reading, Daniel was well equipped to engage in phonemic awareness. He could sound-out and synthesise words with relative ease, and he could spell phonetically regular words that were relatively complex (such as wombat, hundred and contact). However, a significant degree of difficulty began emerging when it became time for Daniel to cease the overt sounding out strategies and begin transitioning to a more orthographic approach to both reading and spelling. As soon as he was required to make graphemic choices for phonemes such as in "turn", "tern" or "turn", he experienced confusion. He failed to form robust mental graphemic representations (MGRs) of words and as such, he failed to develop automaticity of spelling and reading.

What does this look like?

- Over reliance on phonemic analysis
  Daniel will "sound out" complex words that can no longer be satisfied with a purely phonic approach:
  speshel /special furies / furious
- Inconsistency
  Daniel will spell the same word with two or three different versions within the one text:
  dangeres dangeris dangruss
- Violations
  Daniel will encode words using violations of English spelling orthography:
  jummped barscket
- Lack of automaticity
  Daniel relies on mnemonics for words such as "because" that he should have automatic access to by his age.

In a spelling test of words taught in a previous week, his self-talk reveals the struggle he experiences with accessing new learning:

come
"Is that 'came' or 'come'? I can never remember."
came
because
"Big elephants can always

understand small elephants."
because
breakfast
"break the fast."
brackfast
elephant
"el – e ……just figuring out if it's 'ph' – I think I got it wrong."
eliphant
dangerous
"If I got that right, I'd be surprised."
Dangers

What were his goals for intervention?

The overall goals for intervention were to develop accuracy, fluency and automaticity at word level for reading and spelling in order to improve his functional literacy ability. It was vital to develop robust mental graphemic representations (MGR) from Daniel's existing "fuzzy" MGRs.

What do we mean by robust mental graphemic representations?

We want every single word that a child has to read or spell to end up becoming what is commonly known as a "sight" word (Kilpatrick 2015 and Apel 2011). This is a word that is deeply embedded in a reader's orthographic word bank so that individuals can access that representation rapidly and efficiently. Once a word has been stored accurately, it is considered to be a robust mental graphemic representation (or MGR).

There is some contention surrounding the use of the word "sight" to refer to words stored as MGRs. This is because the semantic connotations of the concept "sight" suggests to some that the words must be taught by highly visual mechanisms, as if by "sight" when nothing is further from the truth!

Apel (2011) explains that the way to build up "sight" words is through the development of robust MGRs. He clarifies, "MGRs contain specific sequences of graphemes representing written words. MGR knowledge is one aspect of orthographic knowledge; when one has a clear mental image of a word, then correct writing and reading of that word should occur." (p.593)

How do we measure mental graphemic representations?

Norton and Wolf (2012) explain that rapid automatic naming (RAN) accounts for much of the fluency we strive for with reading and spelling acquisition; it is considered to be a microcosm of the reading system, providing an index of one's abilities to integrate multiple neural processes. Administration of RAN tasks provides insight into whether a student is equipped with the ability to form strong, robust MGRs. The nature of the relationship between RAN and MGRs is not definitive, however it can be hypothesised that RAN "taps into" a student's naming speed for orthographically-presented stimuli. Children with average to high RAN cope much better with the establishment of robust MGRs than children with poor RAN.

How do we form robust mental graphemic representations?

Ehri (2014), Moats (2000), Kilpatrick (2015) and Apel (2011) provide us with some of the best advice for facilitating the development of robust MGRs. They propose the following principles to employ within any literacy program at Tier 1, 2 and 3 levels:

- Use a "speech to print" approach; capitalise on our innate understanding of sounds in words
- Show children the placements for different phonemes; use puppets, models or videos
- Don't spend too much time on unnecessary tasks of phonological awareness; focus on synthesis and analysis (but build in more complex manipulation at a later phase)
- Introduce words for reading at VC (vowel + consonant) and CVC (consonant + vowel + consonant) as soon as there are enough phoneme:grapheme correspondences to do so
- Continually engage in phoneme:grapheme mapping
- Integrate spelling with reading; they help each other!
- Use decodable readers. Allow students to 'access' words with confidence; help them to learn how words work
- Repeat the reading and spelling processes at word and text level; this will help to build up robust MGRs
- Build in phonemic and graphemic manipulation as advanced phonological awareness activities

What did Daniel's therapy "look like"?

I elected to present Daniel as a case study for the purpose of exploring orthographic processing to develop spelling competency. The primary reason for doing so was to reflect on what did not work and to speculate on what would have been a more effective treatment regime for him.

When I was treating Daniel in the clinic several years ago, the universal focus for intervention was on a much more analytical and cognitive approach that involved teaching the student words at a "meta" level and providing them with semantic as well as morphological explanations for the structure of certain words. Armed with this theoretical rationale, I embarked on a model of intervention that was heavily weighted towards morphology, semantics and etymology and less geared towards all those techniques that we now know are vital for the establishment of robust MGRs.

When he was 11, I worked with Daniel for 4 weeks on the 'ous' ending in approximately 12 words. He received 4 one-hour sessions and approximately 20 minutes of each session was devoted to this goal. Home practice was set at 3 twenty-minute sessions per week.

The issue in therapy was that no matter what rule or concept was taught to Daniel, he always demonstrated thorough understanding of it within the lesson, but generalisation was slow and inconsistent.

The first strategy was to divide the "ous" words into those with positive and negative connotations. Positive words included: fabulous, tremendous, marvellous, joyous, famous and generous. Negative words included: dangerous, jealous, nervous, ridiculous and serious. It was assumed that attaching contrastive meaning to the words would facilitate his memory of the system.

In addition, the syntactic role of the morphological ending 'ous' was examined and reinforced. Daniel was told that the 'ous' turned a word such as 'danger' which was a noun into an adjective 'dangerous'. The same could be said for 'fame' to 'famous' and joy' to 'joyous' etc.

Another phonological strategy was to divide words into syllables and recognise how the 'ous' ending was embedded in the final syllable (and contained the schwa sound). Daniel was required to read these words, break them into syllables, sound them out, write them

into sentences and finally use them in paragraph level texts.

A decodable text that focused on 'ous' endings was employed for the purpose of repeated readings and dictation.

Daniel was provided with multiple opportunities to read and spell the word under timed as well as untimed conditions.

What went wrong?

By normal standards, this therapy regime could be considered as providing a reasonable scope of activities and approaches necessary to bond the phonemes to the graphemes in this selection of words and develop mental graphemic representations of these words for him. However, a four week period of intervention was insufficient to achieve this process, and the selection of techniques did not include enough of the following:

1. phoneme:grapheme mapping (sound out "s.t.r.a.p" while mapping out the letters)
2. repeated reading of single words
3. phoneme manipulation (listen to the word "strap". Take out the "a" and put in a "i". What word have you made?)
4. grapheme manipulation (Make "strap" into "strip" using letter tiles)
5. identifying graphemes at a mental level (hold the word "strap" inside your head. Now tell me what is the fourth sound? What is the second sound?)

Because he had such strong phonological awareness skills and well developed phonological memory, Daniel was well able to divide words into syllables and sound out each syllable in order to identify the placement of the 'ous' ending. Daniel was able to complete all activities related to the teaching of this set of words and sustained high accuracy over four weeks, which led me to believe that he had achieved the goal, however when he was tested in the sixth week, most attempts represented his original primitive phonic encoding of words:

joyes / joyous X
marvelus / marvellous X
nervous / nervous
posoners / poisonous X
rediculous / ridiculous X
tremendous / tremendous
dangers / dangerous X
enormous / enormous
fabuless / fabulous X
famiss / famous X
generes / generous X
jealous / jealous

Where to next?

The issue for Daniel is that he can understand how words work; he has strong linguistic and morphological awareness. He can process the phonemic, morphological and semantic aspects of the word selections, but he cannot "tip" over into orthographic processing where he develops robust MGRs of these words because his RAN is too weak to allow him to do so. And so, it is necessary to "trim" the word list and reduce the number of items he must learn. It is also important to do more mental processing of the words, where he is required to hold the word at a mental level and identify and manipulate the phonemes and graphemes contained within it. More repeated reading and more encoding of the selection of words will also assist to develop stronger MGRs. Daniel is very aware of his difficulties and gives me encouragement, saying, "I think this new method is working for me Jen", but until I can test his spelling of "dangerous" and he writes, "dangerous" I will not be happy with my methodology!

Jenny Baker has worked in the language and literacy arena for over thirty years and now runs a busy private practice in W.A. with 21 Speech Pathologists working with students of all ages with literacy issues. Jenny has presented workshops on spelling and written expression at many events conducted by Speech Pathology Australia as well as The WA Dyslexia SPELD Foundation (DSF); she teaches fourth Year Speech Pathology students about theoretically sound and empirically researched practices underpinning the assessment and intervention of literacy skills. She is an advocate for the vital role Speech Pathologists play in the research based diagnosis and remediation of learning difficulties.

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Spelling: a retrospective look at past research and practices

Peter Westwood explains that we have learnt a lot about spelling over the last hundred years and teaching needs to more consistently put into practice the methods that have been shown to work.

Spelling has been a popular focus of attention for researchers over many generations. Some of this attention has been directed to studying students who find spelling an extremely difficult skill to master. This short article provides a brief overview of some of the past research and teaching practices with due reference to the attitude towards learning and teaching that prevailed at particular times.

Earliest studies

The earliest published work that I can locate that specifically addresses spelling is a paper by Wyckoff (1892) with the title Constitutional Bad Spellers. It may represent the first serious consideration given to students who had a learning disability affecting their encoding of words. This was the same time period when attention in Germany and the UK (and later in Scandinavia) was being given to a phenomenon that was at first termed 'word blindness'. This disability affected a small number of extremely poor readers of normal intelligence and who were free from any sensory impairment (Hinshelwood, 1895; Kussmaul, 1877; Morgan, 1896). We refer to this condition now as 'dyslexia' or 'reading disability'. All these students with very poor reading skills were found also to be extremely weak spellers; and Carman (1900) believed that their problem was due to 'poor observation of small details of words in print'. This obsession with visual perception as the key to spelling ability has continued even up to today, both in the teaching practices we use and in the focus of much of the research (Westwood, 2015). In the beginning, poor auditory skills and lack of phonic knowledge were relatively overlooked as contributory factors in spelling difficulties.

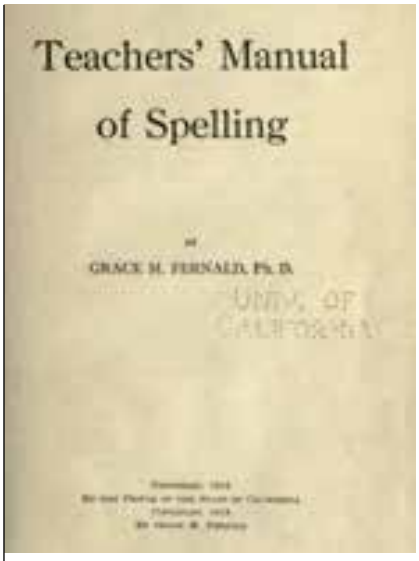
The early part of the twentieth century was a very active time for research into spelling. Excellent reviews of this period can be found in Gruppe (1913) and Hollingsworth (1918). It was an era when there was no doubt in educators' minds that spelling was a skill that needed to be taught, not left to incidental learning. Time was allocated in most primary school timetables for spelling instruction; and there was a clear expectation that students would work hard to become competent spellers. Efforts were made to develop materials such as graded word lists and 'word families' that could be used by teachers to develop students' spelling ability and test their progress over time (e.g., Ayres, 1915; Starch, 1915). Handbooks also appeared in print giving practical guidance on how to teach spelling (e.g., Tidyman, 1919). Unfortunately, rote learning and memorisation remained the principal methods of learning to spell.

Among the writers and researchers with greatest impact on classroom practice at that time was Grace Fernald. She produced the Teachers' Manual of Spelling in 1918, based on her own teaching experience. Fernald's little book is amazing in that she was addressing what are still current matters of interest, namely visual and auditory perception, visual imagery and memory, the learning of phonetic and non-phonetic words, and how best to develop automaticity (which she called 'spelling habit formation'). It is interesting to note that the opening sentence in Fernald's 1918 manual is: 'The complaint is very common that the present age is one of poor spellers'. Perhaps nothing changes in 100 years, given the concern today over declining spelling standards of school students and university graduates in the US, Australia and Britain (ACARA, 2017; Elliott et al., 2016; Meeks, Kemp & Stephenson, 2014; Paton, 2012; Queen's English Society, 2018).

The same year that Fernald published her manual, Hollingworth was producing a monograph titled the Psychology of Special Disability in Spelling (1918), drawing on the information that was becoming increasingly available on the topics of 'word-blindness' and 'alexia'. Hollingworth's book is available to be read online by entering the title at: www.hathitrust.org

In the United States in the 1920s, Gates was writing about the development of spelling ability in his volume The Psychology of Reading and Spelling (Gates, 1922). Looking at that book now, it seems that he placed too much emphasis on visual memory as the principal influence on the ability to spell. His section on 'how to learn to spell a word' describes exactly what amounts to the popular 'look-say-cover-write-check' method, although he does not refer to it by that name.

The late educational psychologist Sir Cyril Burt has been discredited for his work on twin studies in the UK, but his earlier work on basic academic skills was very sound. He referred to 'reading, spelling and arithmetic' as the most important subjects to be taught in the primary school curriculum. Burt was the first to provide classroom tests that can yield what he termed 'spelling ages'; and he was convinced that two



simple tests used together (spelling and mental arithmetic) were highly sensitive for detecting students described in those days as 'backward' or 'innately dull' — we prefer to say 'students with learning difficulties'. One of his most widely used publications at the time was Mental and Scholastic Tests (Burt, 1921) containing well-designed assessments for spelling.

Burt's interest in spelling went beyond testing. He also made recommendations concerning teaching approaches for students who were poor spellers. For example, he suggested that learners who had difficulty detecting sounds within spoken words should be taught by a visual approach (e.g., flashcards). However, if a student was weak in visual memory he or she should instead engage in word building with letter cards to become familiar with letter sequences and spelling patterns. More recent research has questioned the validity of this simplistic 'modality matching' approach in remedial teaching (Kavale & Forness, 1987; Willingham, 2005). Current research suggests that rather than trying to bypass a so-called weaker modality we need instead to integrate both auditory and visual perception in the teaching of spelling. In particular, activities to improve phonemic awareness and phonic skills should accompany activities such as flashcard recognition and repeated writing as an aid to spelling. During Burt's time, the importance of training phonemic awareness (detecting the separate sounds that make up spoken words) for reading and spelling had not been explored—that did not occur until research in the 1980s (e.g., Bradley & Bryant, 1983).

Through the 1930s into the 1950s, attitudes in schools were still

positive towards the teaching of spelling as an important literacy skill. In 1951 it was written "Every good teacher is eager to help pupils spell better so that they will not be handicapped when they need to write. Accuracy in written communication is a serious matter" (Hildreth, 1951, p.245).

In those years, teachers in the US were relying on advice from books such as Teaching Spelling (Hildreth, 1955), an important text because it acknowledges the role of phonics in attempting to spell unfamiliar words. Teachers in the UK and Australia came to rely on guidance from materials authored by Schonell (1932; 1942). I recall being given a copy of his Essentials of Teaching and Testing Spelling when I took up my first teaching position in a primary school in 1959. I was told to give my students a set number of words to learn each week and to test their spelling regularly. I did as I was told.

Spelling instruction falls out of favour

Then came the 1960s. This was the beginning of the period in which creative writing became the ultimate goal in literacy education. Teachers were encouraged to believe that spelling ability would develop incidentally when students wrote freely every day about exciting topics, and when they were encouraged to invent the spelling of any words they wished to use. The idea that spelling should be taught as a separate skill was frowned upon, much in the same way that teaching phonics was frowned upon later during the reign of the whole-language approach. The 1960s also saw look-and-say whole word recognition emerge as the main way that reading was to be taught in primary schools. Phonics teaching became much less popular, although some teachers had the good sense to continue using the method.

In the late 1960s, Peters explored the weaknesses in the argument that spelling is caught not taught (Peters, 1967). Her conclusion was that spelling does indeed need to be taught. However, she continued with the belief that visual perception and visual memory (together with an easy style of handwriting) contribute most in learning to spell. She felt that the key was to train children to attend closely to commonly occurring letter sequences that are found within many different words. She favoured teaching strategies such as look-cover-write-check to increase visual imagery of word forms.

Remedial teaching took a wrong turn

While mainstream education in the 1960s and 1970s was undervaluing the direct teaching of phonics and spelling skills, remedial and special education headed off in any entirely different direction anyway, believing that poor spelling and reading may be due to deficits in underlying processes, such as faulty visual discrimination, confusion over right and left, and inefficient eye tracking. This belief led to the introduction of 'ability training' programs such as the Frostig Visual-Perceptual Training Program (Frostig & Horne, 1964). This program aimed to improve processes that were believed to underpin reading and writing by providing worksheets that claimed to improve hand-eye coordination, figure ground discrimination, form constancy, and spatial relationships. Despite the brief popularity of this program in the US, research by Jacobs (1968), Friesen (1969) and others could find no supportive evidence of its efficacy. The activities are too far removed from working with words to have any effect on children's spelling or reading ability—even though they may get better at completing the worksheets. Meta-analysis of data from studies of perceptual training programs usually yields negligible effect sizes (Hattie & Yates, 2014).

A glimmer of light

The introduction of a program first titled Morphographic Spelling (Dixon, 1976) and later renamed Spelling through Morphographs (Dixon & Engelmann, 2007) was a serious attempt to swim against the tide of incidental learning. This direct instruction program was designed to teach spelling to 4th Grade and older students by focusing on mastery of root words, prefixes and suffixes. Many features of the program adopt a behavioural teaching approach, with modelling of responses, guided practice, reinforcement and corrective feedback. The approach was utterly shunned by mainstream disciples of creative writing, who were always appalled by any notion of direct teaching that focused on a single skill. This morphographic approach was (and still is) used mainly in remedial education settings. For a thorough review of direct instruction approaches for spelling see Hempenstall (2015).

It is pertinent to note that the inclusion of morphology (the study of small units of meaning within words) in spelling and reading programs is now regarded as cutting-edge pedagogy (e.g., Crosson & Moore, 2017; Hammond, 2017; IDA, 2017; Zoski & Erickson, 2017), so Morphographic Spelling was thus ahead of its time.

Whole-language was far from whole

The 1980s and 1990s saw schools in the US, Britain and Australia adopting the whole-language approach for literacy teaching. This grew out of the creative writing movement together with the growing influence from constructivist theories of learning. In whole-language approaches, specific skills such as spelling and phonic decoding were not to be a main focus of instruction; instead it was believed that the emphasis should be on reading for meaning and writing for real purposes. Students were encouraged to guess words in their reading and to invent the spelling of any word they wanted to use when writing. Their teachers were not expected to mark written work too harshly lest this crush imagination and creativity. Practice exercises for spelling were taboo. One of the main arguments from the disciples of whole-language approaches was that English spelling is so unpredictable that it is useless to try to spell words by attending to their component sounds. This is nonsense, because at least 80 per cent of words can be written correctly or almost correctly by using sound-to-letter correspondences. That percentage increases significantly if a speller also knows a wide range of commonly occurring letter groups (orthographic units) that represent pronounceable parts of words, such as -ing, -ous, un-, -tch, - nk, - sk, str-, -ight.

> …at least 80 per cent of words can be written correctly or almost correctly by using sound-to-letter correspondences

Some educators argue that the whole-language approach did not have a negative impact on students' spelling standards because they learned to spell by writing every day; but the evidence suggests otherwise (Westwood & Bissaker, 2005). For example, testing

of a large number of students in South Australia found a decline in spelling standards between 1978 and 1993, particularly in the primary school years. And by 2004, average spelling standards had not returned to the level of 1978. It is unlikely to be coincidental that South Australia embraced whole-language most enthusiastically in the period from 1980 to 1999, and the teaching of phonics and spelling was well and truly put on the back burner.

Input from cognitive psychology

In the 1980s and 1990s, researchers who were far removed from whole-language ideology were discovering that students' reading comprehension, writing skills and spelling could be improved significantly if they were explicitly taught to use strategies for approaching these tasks systematically (e.g., Cole & Chan, 1990; Lyndon, 1989; Zutell, 1979). For example, when students are given words to learn they also need to be taught to examine each word and decide whether it can be written correctly by 'spelling it as it sounds', or whether it is non-phonetic and needs to be mastered by strategies such as look-cover-write-check or repeated writing. The use of cognitive strategy training is now strongly recommended and has gained acceptance in many classrooms since the 1990s (Davis, 2013; Hepplewhite, 2008; Tompkins, 2010; Westwood, 2014). The approach can be regarded as 'teaching spelling as a thinking process'.

Current developments

It is a very positive sign that the revised National Curriculum in the UK, the modified Australian Curriculum, and the Common Core State Standards in the US have all strengthened the amount of attention given to phonics, word knowledge and spelling. Research has strongly supported a view that phonic knowledge does contribute greatly to the development of independent spelling ability, as well as strengthening reading skills — but some schools are still doing far too little teaching of decoding and encoding. Quigley (2016) has rightly suggested that all schools need to conduct an audit to determine just how consistently spelling is being taught at each year level. I suggest that it is equally important to discover how much coverage of methodology for teaching spelling is being provided for trainee teachers in our pre-service teacher education courses. I suspect it is little or none.

Coupled with this renewed attention to phonics, research has also discovered the benefits of introducing 'word study' to help reveal connections between phonological, morphological and orthographic structures within words (Bowers & Bowers, 2017; Crosson & Moore, 2017; Gray, Ehri & Locke, 2018). The current view is that children acquire the ability to spell on the basis of their increasing phonological, linguistic and semantic knowledge, as well as from very frequent exposure to words in print (Treiman, 2017). Explicit teaching methods are most effective for addressing and integrating these areas of knowledge.

Research has strongly supported a view that phonic knowledge does contribute greatly to the development of independent spelling ability

Finally, recent research has continued to investigate the effects that digital technology (including spell-checkers) is having on the spelling ability of students. Elliott et al. (2016) have reviewed the literature in this area and conclude that to date there is no clear evidence of negative effects. Rather than proving to be detrimental to spelling, technology has given us useful programs and apps that can be used by students for learning to spell (Ecalle et al., 2009; Hetzroni & Shrieber, 2004; Kast et al., 2011; Wu & Zhang, 2010).

Peter Westwood is a retired academic who now freelances as an education writer and editor. He is widely published in the field of education with his best-selling text Commonsense Methods for Children with Special Needs (Routledge) now in its 7th edition. Routledge also publishes his book Teaching Spelling: Exploring commonsense strategies and best practices. Peter is a Life Member of Learning Difficulties Australia.

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Activities for Practising Spelling – Toxic to Helpful

Based on many years researching and practising spelling activities with struggling students, **Lyn Stone**'s forthright suggestions about what really works, and maybe more importantly what doesn't, will provoke lively debate amongst those trying to help children to become better spellers.

Fluent, accurate writing is an apex activity. It is one of the most complicated things a person can do. It requires the creation and use of brain structures available only to humans, years of practice, and, if it is to be done well by all, it requires skilful teaching from the outset. Within the set of skills needed for writing fluency, there is spelling, often not given its full due because it is regarded as a lower-order or mechanical skill. When students do not learn spelling easily, however, the difficulty forms a bottleneck that often limits the expression of higher-order writing skills. The teaching challenge involved in helping these students to improve their spelling is, in turn, surprisingly demanding. English spelling presents a host of challenges to both students and teachers. It is a very complex system, and is essentially multi-layered, reflecting intricate, context-dependent patterns of sound-letter correspondences and meaning-related considerations, as well as reflecting the history of English borrowings from other languages. Many teachers are not confident about teaching spelling, and unfortunately, spelling practice may well be the greatest victim of wasted opportunity in literacy instruction. The number of "spelling activities" available that do nothing to increase spelling ability is astounding.

This article is about practising spelling, rather than about choosing words to be taught or helping students to understand the meaning and phonemic and morphemic structure of the words.

The Spelling Activities Scale, below, is based on a collection I have made over the years of homework sheets that have been given to my children. I then placed them on a scale of merit, ranging from toxic, through useless and then to helpful.

To determine the place of each spelling practice activity on the scale, I asked the question, "Will this improve/reinforce a typically developing child's ability to spell?".

Before I go on, I'd like to stress again that this article is about spelling practice – what teachers can do to help students consolidate what they have been taught about the spelling of words, and reach a point of automaticity and fluency in spelling. There are several critical aspects of literacy learning that are not on this scale; I take it that they go without saying. One such aspect is the act of silent reading. Reading increases exposure to words and patterns and increases vocabulary (Cunningham & Stanovich 2001). But it is not a spelling activity.

Even more importantly, explicit, systematic, direct, cumulative, structured teaching with a clear scope and sequence is not on this scale either. It is, rather, taken as a sine qua non. This Spelling Activities Scale refers to activities to reinforce the teaching of sets of words and orthographic patterns, once they have had their phonemic structure explored, and have been defined, with their meaning components, including morphemes and root words, fully analysed. When literacy teaching is not explicit, systematic, direct, cumulative and structured, and does not include meaningful analysis of the spelling words to be studied, the spelling practice activities outlined here will be characterised by a shorter helpful arrow, with a corresponding increase in length of the longer, toxic arrow.

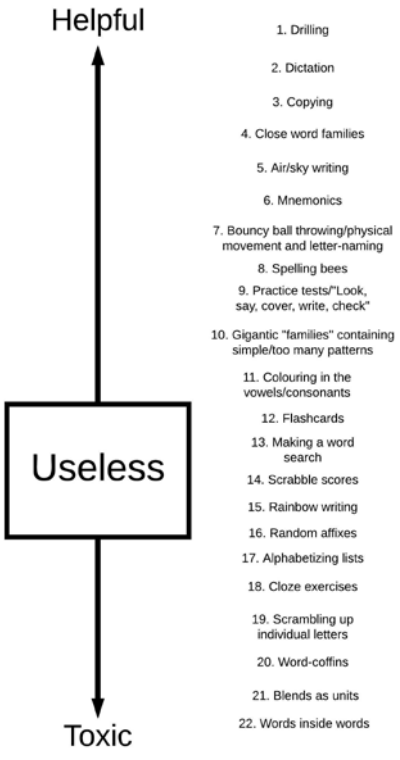

Figure 1. The Spelling Activities Scale

Anything on the helpful part of the Spelling Activities Scale will have some positive, long-lasting effect. Anything on the useless part may have a temporary effect, but offers nothing long-lasting or constituting a good use of learning time. Useless strategies have about the same effect as cramming for an exam, which gives them a temporary appearance of useful. Anything in the toxic area will help to instil poor habits in typically developing children and will risk actually impeding the progress of those with learning difficulties.

For some children, toxic activities also include those things that may be helpful for others. For example, spelling bees can be too confronting and anxiety-causing for some children, and will fail to teach them anything except to avoid school.

In a similar vein, some activities deemed useless could actually prove to be toxic for children with learning difficulties. These children need to spend their time doing things to improve their skills. Useless activities rob them of crucial practice and opportunity to improve, thus rendering those activities toxic in the long term.

I daresay there are many more activities not mentioned, but the ones that make it into the helpful zone involve processing words from left to right, in the correct sequence, all the way through. Any activity that requires messing with letter sequences begins to slide into the useless/toxic zone.

Toxic spelling activities

We'll start with the worst. At the very bottom of the scale, and toxic to everybody, is the act of asking students to look for words inside words, irrespective of whether they are linked in meaning. This is not the same as separating root words from their affixes (e.g. play + -ing = playing), but instead, for example, getting them to spot the word sin in business or win in throwing. It is simply irrelevant and not generalisable to any other words.

Then comes blends as units. I have written about this extensively in a blog piece called Round the Blend, but in summary, my experience tells me that activities promoting clusters of consonants such as st- in stop or –nd in hand as single units are not linguistically accurate and are the direct cause reading and spelling errors in too many cases. Some students who struggle with the awareness of the separate phonemes in a consonant cluster find it very difficult to make sense of spelling when the identity of the phonemes is not clarified for them.

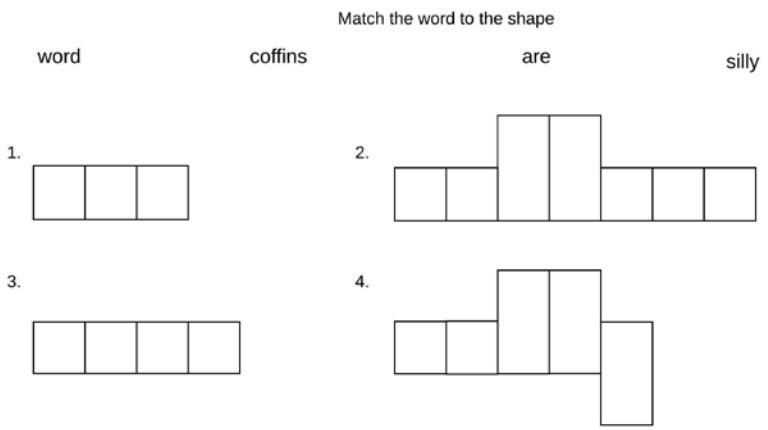

Figure 2 Word-coffins

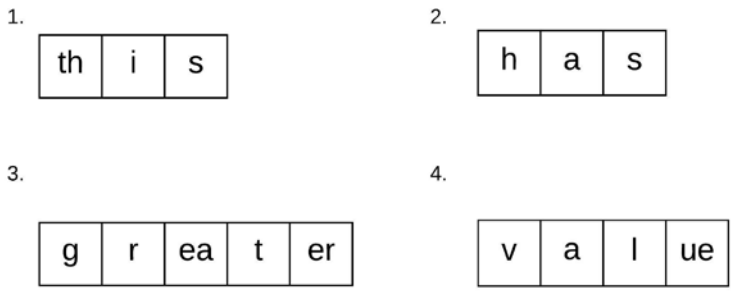

Figure 3 Elkonin boxes

> Useless strategies have about the same effect as cramming for an exam, which gives them a temporary appearance of useful

This brings us to word-coffins. This is not a widely used term (because I just coined it last week), but it is certainly a widely used activity. This is where children are directed to analyse words according to their shapes. They draw boxes around them, or write words into pre-fabricated word boxes. This activity is so devoid of anything resembling good practice, it actually pains me to mention it. I am not sure what theory it could possibly be based on, except some dreadful "visual" part of the baseless 3-cueing system. They are called word-coffins because to me, those boxes signal that high quality spelling instruction is as dead as a doornail in this classroom.

I've also heard of word-coffins being referred to as Elkonin boxes, but they are not the same thing. Daniil Elkonin, a Russian-Soviet psychologist, would no doubt have been very disappointed to see his name applied to such a dreadful activity. Elkonin boxes, which give a phonology-spelling framework, are useful. The boxes are all the same size, and each orthographic pattern is represented within one box and matched to the phoneme it represents. The value of this task is to draw students' attention to the idea that there are different phonemes in words which can be isolated through careful listening and awareness of the position of the lips, tongue and teeth.

Bordering on useless for average learners, but toxic for struggling children, is the act of reducing words to individual letters and cutting/jumbling them up for reassembly. Placing orthographic patterns in memory requires exposure to the correct sequence of letters (Ehri 2014). Messing

about with an incorrect sequence risks diminishing, not increasing, a child's memory for orthographic patterns.

Similarly, fill in the missing letter exercises can be detrimental to struggling students, and for typically developing students, I ask, "What's the point? It is better to spend time reading and writing whole words than engaging in no-sequence, no-pattern busy work."

Alphabetising lists of words is great if you want to teach the order of the alphabet, but not much else. As a spelling activity, it is generally useless, and if relied upon too heavily, reinforces the unhelpful habit of only paying attention to the first letter of a word.

Useless spelling activities

Then we enter the great grey desert of useless activities. They won't really harm anyone, but they won't teach much, if anything, about spelling. We begin with lists containing random words, some with affixes attached and some not. These can be toxic in the absence of explicit instruction in morphology. For example, a Google search for "Grade 3 spelling list" often yields something like the following hotchpotch:

- why
- began
- parties
- being
- hopping
- beautiful
- knight

Each one of these words could be used as a gateway to understanding more about English spelling, but instead, they are lumped together as whole words, to be crammed as an unrelated list and never to be used again. No pattern is learned that would help with the spelling of similar words. No awareness is gained of morphology or etymology. The task is much harder than it need be and much less effective than it could be.

Next up is "rainbow writing" (writing a word using a different colour for every letter). It verges on the toxic because it is so prevalent, time-consuming and yet so devoid of merit. Like jumbled letters, it disguises orthographic patterns. Any activity that requires a child to use more than two colouring implements is art, not literacy.

Then there is the bizarre practice of assigning Scrabble word scores to spelling words. Each letter, due to its frequency, has a certain score. The letter <e>, being the most common, has a score of 1, whereas <x> and <j> have 8 points etc. This may slightly enhance the statistical learning aspect of spelling (Arciuli & Simpson 2012), but on such a small and painstaking scale that it's hardly worth the bother. Regular reading is far more likely to establish an understanding of letter frequency, so why not do that?

We do have some pretty excellent software that will create word search puzzles at the push of a button, and for that, we can be thankful. But it's hardly an activity that places correct patterns into the orthographic lexicon at any rate worth spending time on. However, searching for words in a word search puzzle is a time-consuming activity that fails to cement the orthographic lexicon efficiently.

I see flashcards being recommended for helping with spelling, but I've yet to see how they could possibly be useful. If you flash a word at a person, you are asking them to memorise a word for reading, not for spelling. I know of no research study that has shown whole word methods to be superior to structured literacy in any aspect of learning to read and write. Flashcards for spelling practice are of little use.

Moving towards useful activities…

Colouring, circling or underlining vowels and consonants in words is the first activity on the scale that requires actual processing from left to right. It's still a bit mindless, but we're at last getting somewhere, because the focus is on drawing student attention to syllable structure and orthographic patterns, even if the mechanics of circling or colouring are clumsy and time consuming.

Word families are terrific things… if planned and sequenced carefully in a way that draws student attention to learning that can be generalised. For example, learning the 'igh' words (high, tight, light) all at one time makes great sense. Poorly conceptualised groupings that are based on limited teacher knowledge are confusing because they are not generalisable. For example, lied, tier and chief ought not be grouped together. Each is based on a different orthographic pattern, and lumping these words together makes no sense to students. Likewise, putting nose, road and slow in the same 'family' doesn't help students to understand which spelling of a particular phoneme should be chosen. Sometimes, the demands are even greater. Learning to spell play, fate, neigh, rain, steak, and obey all at once is much too complex and the words in these families often contain other information that needs to be explicitly taught.

I see hundreds of worksheets based on rime/coda "word families", such as pan, man, can etc. This is a waste of time, given that this type of simple CVC pattern is relatively easy to perceive and represent. That is, it is more efficient to learn the individual letters and sounds and combine these to read and spell words than it is to also learn combinations like 'an'. If you know 'a' and 'n', then learning 'an' as a word family is superfluous. Worse still, are vast "families" based on a single letter, usually an initial consonant, like run, right, ranunculus (okay, I exaggerated the last one, but it might as well be on these lists, for all the good they do).

If you want your families to work, use close families, not random, sprawling ones. One example of a close, useful family, is the group of nine separate words that can be generated just by adding a different consonant to the word all (ball, call, fall, gall, hall, mall, pall, tall and wall). They are often misspelled, so I have them generated, defined, used in sentences and drilled as the all family and I usually see long-term transfer to subsequent dictation and composition pieces.

Another useful word family is that of words with 'wa'. It is useful to know that the letter <a> is affected by a preceding <w> in many words. This is what I call the w-effect. The letter <w> makes the <a> say /ɒ/, such as in was, wash, want and wand. This is a useful family for several reasons:

- It contains many high-frequency words.
- It applies broadly.
- It can be used to illustrate the vowel-changing properties of <w> in other words (work, war etc.). I tell students to be suspicious if they see <w> preceding <a> or <o>.

Sometimes my students even get inspired to illustrate the W Effect, like my friend Douglas did quite dramatically in Figure 4 (in his own time, in addition to his reading and spelling homework, not in place of it).

Figure 4. W Effect picture

The teaching of these families does not precede instruction in sound-symbol relationships and phonological processing, but is intended to be used as a bridge between phonology and orthography.

Sliding back down to the slightly helpful area, practice tests are often recommended as a spelling activity. They fall into a similar zone as the "Look, say, cover, write, check" catchphrase that is rampant in Australian schools. In isolation, these activities teach nothing except that the student is still wrong or hasn't crammed the words successfully. Perhaps as part of a larger, more explicit, systematic sequence of teaching and learning, where students have the opportunity to self-correct and reflect on the patterns they find difficult to remember, they have some value.

Spelling bees are a somewhat discriminatory, only really favouring the 1-2 exposure types who memorise words easily, but if done cooperatively and in teams, where everyone who wants to participate gets a turn, they can be quite good practice.

Practising spelling through letter-naming whilst being engaged in a physical activity makes some sense, if the words are directly and explicitly taught first. There is always something be gained from practice, and it might be a bonus that this type of practice is more appealing to some students than just sitting. It is a form of drilling, and if drills can be fun without distracting from the purpose, there is no harm in that.

Using mnemonics (memory hooks) for selected words is helpful, if used appropriately. It is tempting to try and rely too heavily on mnemonics, so my rule of thumb is that if a word can be sounded out using the child's store of known patterns, a mnemonic is a waste of time. Mnemonics come down to personal preference and teacher knowledge, but I urge caution when applying them too liberally. A strange example of this is teaching a mnemonic for the word geography. I have seen it presented as "George's elderly old grandfather rode a pig home yesterday." The opportunity to teach three very useful morphemes, geo-, -graph- and –y would be lost in favour of a nonsensical sentence.

Having said that, one of my favourite mnemonics is for library. I could teach students that the word library comes from libr, meaning "book" and that libr is thought to be in the same etymological family as leaf, or that it has a noun-forming suffix: –ary, or even that it is often said with a collapsed syllable in the middle, but I prefer just to say, "There's a BRA in the library!" Not many forget it after that.

The Top Five

The top five activities in the countdown all require rapid recall and writing. These, more than any other, will deliver the necessary practice in spelling to improve long-term recall.

Five: Air/sky writing. I've been watching this activity emerge over the years, and I must say, judiciously used, it seems promising. This is when children use their fingers to write their target words in the air. It is important when doing this activity that students always recite the words from the first letter to the last rather than backwards, for example.

Four: Word families: I cannot stress enough the importance of grouping words to be learned as a spelling focus into close, logical families. This can be done along orthographic, etymological or morphological lines (and those lines often overlap).

Three: Copying. Copying words, sentences and paragraphs is a great way not only to practise fluency and spelling, using a scaffolded, stable framework, but if used purposefully, can also enhance everything else that constitutes writing.

Two: Dictation is slightly harder, in that students have to use their memory for spelling and writing conventions. It is doubly useful to copy and dictate sentences and paragraphs using explicitly taught words.

One: Drilling: At the very top we have drilling. Yep, good old drilling. Old-fashioned, old-school, back-to-basics, traditional drilling. I don't care what names are thrown at me for recommending this, and neither does any teacher/practitioner worth their salt. By drilling, I mean going over and over an expanding list of words. Here's a simple procedure:

- Harvest words from written compositions by students, focusing on words that are misspelled
- Model the spelling of each word and have students write them in columns.
- Have students indicate, through a simple marking system, e.g. underlining digraphs, placing a cross underneath silent letters etc., the parts that they need to pay most attention to. Place them in families containing similar difficult parts.
- Drill the words, first by sounding each phoneme and then by saying the whole word.
- Define and use each word in a sentence
- Use the words in copied/dictated sentences and paragraphs.
- Have students compose sentences containing the words.
- Build up to hundreds of words and practise drilling the columns frequently.

If you give a list of spelling words to a child to learn, that child has made an investment of time and cognitive effort. A return on that investment will only come if the child has had enough exposure to the word and enough practice writing it, from start to finish, from left to right. Too often, children are asked to make an investment for zero yield, and then are blamed for getting low scores in measures of spelling ability or for losing faith and motivation. On the other hand, if carefully and explicitly taught, and practised to mastery, spelling word lists can provide a self-extending treasure trove that lasts a lifetime.

Lyn Stone is a linguist and literacy and language specialist. She is a regular contributor to the Australian print and radio media on linguistics as it relates to education and has been featured many times on ABC Radio and Fairfax media, talking about spelling, grammar and dyslexia. Lyn's two flagship programmes, Spelling for Life and Language for Life have been implemented in schools with excellent results for over a decade and have been published by Routledge as two books. Her new book, Reading for Life will be released on December 20th 2018.

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Spelling bees: a tool for improving literacy?

Nathaniel Swain says rote learning of spelling alone is not great for literacy development

It is not often that commercial television aims to celebrate a love for words, spelling, and grammar. But Channel 10's Great Australian Spelling Bee may have done more harm than good for the teaching of spelling in Australian classrooms.

The show was a competition between precocious 8- to 13-year-olds, required to spell increasingly difficult words out-loud in a high-pressure, high-anxiety environment. Inspired by US National Spelling Bee, the difference between winners and losers were spelling words we wouldn't dream of attempting.

How would you go spelling feuilleton, stichomythia, cymotrichous, or appoggiatura? More importantly, do you know the meaning of these words, and could you use them in a sentence?

Challenging and insightful, or obscure and essentially pointless? In isolation, spelling bees encourage endless memorisation of complex, low-frequency words, and are a distraction from the core elements of good spelling education.

An American tradition

America has a long history of spelling bees, starting in 1925 when a group of newspapers sponsored the competition. Since then, the Scripps National Spelling Bee has held increasingly cut-throat competitions every year.

With ESPN covering the spelling bees for the last two decades, Americans can watch the brightest young spellers every year. During Australia's spelling show, many schools caught the spelling bee hype, with mini spelling bees popping up in many of the classrooms I visited. But was this change for the better?

Promoting the wrong literacy skills

The problem with spelling bees is their emphasis on memorisation. The Scripps National Spelling Bee does involve some vocabulary questions in the earlier rounds, but the focus remains on the oral spelling of increasingly obscure words. Successful competitors need repetitive and deliberate practice to win. Essentially, the kids have to memorise hundreds, if not thousands of words.

Spelling instruction should also encourage an interest and love of words and their power!

What is really important for spelling instruction is teaching students about word morphology (root words, prefixes, suffixies), etymology (word origins), phonics (spelling patterns), and semantics (word meanings, including multiple meanings). While some competitors do use these aspects of word study to win, the spelling bee does not emphasise this, and often this focus on understanding the history, structure, spelling patterns, and multiple meanings of words is missing in Australian classrooms.

Literacy teaching does involve repetitive practice to master the code, but this is merely a means to an end. Spelling instruction should also encourage an interest and love of words and their power!

In later years, students learn much of their advanced vocabulary from reading and writing experiences. Teachers should also provide explicit instruction in vocabulary for general learning (Tier 2 Words) and particular topics (Tier 3 Words). Crucially, students should always learn words according to their structure, meaning and function, as well as their spelling.

Education is more than memorisation

Just like the repetitive practice needed for spelling bees, some products claim that

their daily "brain exercises" will improve cognitive function. The growing market of brain training games and apps reflects the proliferation of pseudoscience to create and exploit new markets.

Lumosity uses the analogy of physical exercise to explain how practising daily "neuropsychological tasks" can improve your "mental fitness". In recent years, companies like Lumosity have lost legal battles defending their use of such claims. Some studies do show that repeated practice on brain training will improve performance on those particular tasks. But there is no evidence that this makes changes to brain function in the real world, so what is the point?

Teachers should not drill students to regurgitate rote-learnt information, without a clear purpose in mind. Education is a process that involves both the gathering of information, and the exchange and negotiation of meaning. Learning should not be promoted as a form of fitness, because education is not like working out. While repeated practice is important for mastering underlying skills, it is merely a means to an end.

What about kids with learning difficulties?

I would argue that spelling bees can dishearten kids who struggle with spelling. Students with specific learning difficulties, like developmental language disorder and dyslexia, struggle to master the spelling and reading of words at a much more fundamental level. However, if a student's only difficulty is poor spelling, that is hardly a barrier to their academic or professional success. Recent research has shown the potential for technology to compensate for such difficulties. We all use spellcheck on a daily basis to help us spell low frequency words.

> Teachers should not drill students to regurgitate rote-learnt information, without a clear purpose in mind.

Spend more time reading and writing stories

In my opinion, The Great Australian Spelling Bee attempted to make literacy education entertaining, by missing the point of it altogether. The purpose of literacy is to masterfully use the code to create and share meaning, not to endlessly memorise spellings or facts ad nauseum. Mindlessly studying for spelling bees (without exploring the richness of word meanings and history) wastes the opportunity to make spelling instruction effective and meaningful. After all, what is the point of spelling the word "insouciant" correctly, if I don't know what it means and thus can't use it to express my indifference to spelling bees?

Dr Nathaniel Swain is a researcher and speech-language pathologist working with teachers and students at Parkville College, the specialist Victorian Government School that provides education to students who are, or have been, detained in custody. His doctoral research evaluated speech-language pathology intervention programs to support young people with developmental language disorder at the school. Nathaniel also works with children and adolescents with learning difficulties in the community.

This is an updated version of an article originally published at The Conversation (https://theconversation.com/spelling-bees-dont-teach-kids-literacy-or-much-else-39692)

Spelling Fact Sheet

Spelling is particularly difficult for those with dyslexia but the **International Dyslexia Association** offers some useful insights and approaches.

How common are spelling difficulties?

Spelling is difficult for many people, but there is much less research on spelling than there is on reading to tell us just how many people spell poorly or believe they spell poorly. Less is known about spelling competence in the general population than is known about reading achievement because there is no national test for spelling and many states do not test students' spelling skills.

Almost all people with dyslexia, however, struggle with spelling and face serious obstacles in learning to cope with this aspect of their learning disability. The definition of dyslexia (see Fact Sheet on Definition at https://dyslexiaida.org/dyslexia-basics/) notes that individuals with dyslexia have "conspicuous problems" with spelling and writing, in spite of being capable in other areas and having a normal amount of classroom instruction. Many individuals with dyslexia learn to read fairly well, but difficulties with spelling (and handwriting) tend to persist throughout life, requiring instruction, accommodations, task modifications, and understanding from those who teach or work with the individual.

What causes spelling problems?

One common but mistaken belief is that spelling problems stem from a poor visual memory for the sequences of letters in words. Recent research, however, shows that a general kind of visual memory plays a relatively minor role in learning to spell. Spelling problems, like reading problems, originate with language learning weaknesses. Therefore, spelling reversals of easily confused letters such as b and d, or sequences of letters, such as wnet for went are manifestations of underlying language learning weaknesses rather than of a visually based problem. Most of us know individuals who have excellent visual memories for pictures, colour schemes, design elements, mechanical drawings, maps, and landscape features, for example, but who spell poorly. The kind of visual memory necessary for spelling is closely "wired in" to the language processing networks in the brain.

Poor spellers have trouble remembering the letters in words because they have trouble noticing, remembering, and recalling the features of language that those letters represent. Most commonly, poor spellers have weaknesses in underlying language skills including the ability to analyse and remember the individual sounds (phonemes) in the words, such as the sounds associated with j, ch, or v, the syllables, such as la, mem, pos and the meaningful parts (morphemes) of longer words, such as sub-, -pect, or -able. These weaknesses may be detected in the use of both spoken language and written language; thus, these weaknesses may be detected when someone speaks and writes.

Like other aspects of dyslexia and reading achievement, spelling ability is influenced by inherited traits. It is true that some of us were born to be better spellers than others, but it is also true that poor spellers can be helped with good instruction and accommodations.

Diagnosis of spelling problems

If dyslexia is suspected, and the student is at the kindergarten or first-grade level, simple tests of phoneme awareness and letter naming can predict later spelling problems, just as they predict later reading problems. If a student is struggling to remember spelling words, a standardised test of spelling achievement with current national norms should be given to quantify just how serious the problem is. In addition, a spelling diagnostic test should be given to identify which sounds, syllable patterns, or meaningful parts the student does not understand or remember. A spelling diagnostic test, such as a developmental spelling inventory, will tell a teacher exactly which consonant, vowel, syllable, and word spellings the student must be taught. Third, the student should be tested on his or her knowledge of the most commonly used words in English that are necessary for writing, as these, too, should be emphasised in instruction.

How do children learn to spell?

Children gradually develop insights into how words are represented with letters in preschool, kindergarten, and first grade. This process moves ahead much more quickly (and successfully) if instruction in sounds and letters is systematic, explicit, and structured. Spelling of whole words is facilitated when the child understands that words are made up of separate speech sounds and that letters represent those sounds. As knowledge of that principle increases, children also notice patterns in the way letters are used, and they notice recurring sequences of letters that form syllables, word endings, word roots, prefixes, and suffixes. Memories for whole words are formed much faster and recalled much more easily when children have a sense of language structure and receive ample practice writing the words.

Inventive spelling or spelling words the way they sound is common in preschool and kindergarten children and is a desirable step in understanding how we use letters to spell. However, inventive spelling is not sufficient for students to learn all of the conventions and patterns of Standard English writing. Encouraging students, beyond the beginning of first grade, to invent their spellings or to ignore correct spelling is not constructive.

Is the English spelling system predictable or unpredictable?

The English spelling system is not crazy or unpredictable. It can be taught as a system that makes sense. Nearly 50% of English words are predictable based on sound-letter correspondences alone (e.g., slap, pitch, boy). An additional 37% of the more common words are almost predictable except for one sound (e.g., knit and boat). Other information, such as the language from which a word came (e.g., Old English, Latin, Greek, or French) and word meaning, also helps explain the spellings of words. Only 4% of English words are truly irregular and may have to be learned through whole word methods, such as tracing and saying the letters while the word is being memorised. Thus, it is possible to approach spelling instruction with confidence that the system by and large makes sense–an encouraging observation for students who have great difficulty forming memories for words.

What are the implications for teaching?

Spelling instruction that explores word structure, word origin, and word meaning is the most effective, even though students with dyslexia may still struggle with word recall. Emphasising memorisation by asking students to close their eyes and imagine the words, or asking them to write words multiple times until they "stick" are only useful after students are helped to understand why a word is spelled the way it is. Students who have learned the connections between speech sounds and written symbols, who perceive the recurring letter patterns in English syllables, and who know about meaningful word parts are better at remembering whole words.

Classroom spelling programs should be organised to teach a progression of regular spelling patterns. After first grade, spelling instruction should follow and complement decoding instruction for reading. Children should be able to read the words in their spelling lesson; most learners can read many more words than they can spell.

Understanding correspondences between sounds and letters comes first. For example, before spelling a word, students can orally take the sounds of the word apart. Then, they can recall the letters that spell those sounds. Next, patterns such as the six basic syllable types of English should be taught because they represent vowel sounds in predictable ways. Third, students should be taught a few basic rules for adding endings to words, such as when letters should be doubled, when y is changed to i, and when the silent e is dropped.

A few irregular words should be practiced daily (e.g., come, they, their, who). Tracing and saying the letters, building the words with letter tiles, copying and writing in sentences, all help build memories for irregular words. Students may be able to handle only a few new words at a time, and they may need many opportunities to write words accurately and with supervision before they can remember them. As words are learned, exercises to build fluency, such as word and sentence dictations, are helpful. Having students keep a list of their own particular "spelling demons" for reference supports the development of proofreading ability and aids mastery of the spelling of those challenging words.

It is important that students learn to spell words for writing and not just for spelling tests. Transfer to spelling in everyday writing is essential. It helps if the student is taught to use a proofreading procedure that involves checking for one element at a time, such as punctuation, capitalisation, spelling, sentence structure, and organisation.

Computer spellcheckers are not helpful unless the student has already achieved basic spelling skill, at about a fifth-grade level, and unless the student receives other proofreading help. Spellcheckers do not identify all errors.

Important accommodations and task modifications for dyslexic students include the following:

- grading written work primarily on content,
- writing correct spellings over incorrect ones and limiting rewrites to a reasonable amount,
- providing proofreading assistance,
- encouraging students to dictate their thoughts before writing and giving them the spellings of key content words to use in writing,
- allowing students in intermediate grades and higher to type exams and papers or to use a voice-translation device on a computer,
- encouraging students to hand in early drafts of research papers and essays to allow for revision before grading.

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Letter to the Editor:
Ideology is dooming thousands of children to illiteracy

We need to put ideology aside and implement the mid-year 1 literacy and numeracy check across Australia says **Jo Rogers**.

NAPLAN year 3 results usually show that 90 per cent-plus of students "pass the National Minimum Benchmark" in reading. Yet UNICEF rated Australia as 39 out of 41 countries "in achieving quality education" and the 2016 Progress in International Reading Literacy Study (PIRLS) found that 21 per cent of year 4 children cannot read, with a "significantly long tail of under-achievement". Is there an illiteracy problem in Australia or not?

NAPLAN gives parents an independent indicator of their children's progress and is important to keep. But with questions having only four multiple choice answers, giving a 25 per cent chance of a false positive result, reports of teachers "helping", and no one actually knowing what the National Minimum Benchmarks scores are, they paint a much rosier than true picture.

When the PIRLS 2016 results are considered, 70,000 year 4 children are illiterate, and at all year levels there will be 400,000 children in schools who cannot read. Schools blame parents for not reading enough to their children and blame older children for "not wanting to learn" as if it is not a school problem. This was apparent on the recent ACE/CIS Phonics Debate on YouTube.

Before the 1980s, older teachers remember it was unheard of that any child could go to year 3 without the foundation literacy skills necessary for further learning being established. But since whole language/balanced literacy approaches were adopted in Australia, literacy standards have consistently fallen. These ideas are based on a falsehood that children learn to read naturally by being read to, as they learn to talk. Advocates won't accept that while oral language is inherent; reading is a skill that needs to be systematically taught to be learnt.

… at all year levels there will be 400,000 children in schools who cannot read.

In 2005 the National Inquiry into Teaching Reading (NITL) found that Australia's low literacy standards were unacceptable then and that "scientific evidence for best practice for the teaching of reading was to teach the systematic, direct and explicit phonics instruction so that children can master the essential alphabet code-breaking skills required for foundational reading proficiency".

When this report was accepted by Federal Parliament in 2006, it should have then been implemented into all primary schools by all state education departments then. But it was and still is blocked by teacher unions, English organisations and their advocates, who still hold on to false ideas.

If the NITL recommendations had been implemented into teacher training and into every Foundation to Year 2 (F-2) primary classroom, Australia's illiteracy rate would have dropped to a small percentage by now and Australia's literacy rating in the world would be

back in the top 10 countries where we belong.

And so many children would not have suffered illiteracy and all that brings. Specialist teachers like me have been teaching struggling children privately for decades and we see the devastating effects illiteracy has on innocent children's self esteem and mental welfare.

We teach them to read using the NITL approach above, but most illiterate children don't get help. So they can't catch up to their peers and get an education. Secondary teachers struggle to teach their subjects to semi-illiterate classes and the public's respect for teaching is at an all-time low.

Now the Federal Government has an excellent strategy for each state to implement a mid-year 1 literacy and numeracy check, which would find those children before they fail, let their parents know and then implement an appropriate teaching intervention in class, so that those children can catch up to their peer group and avoid illiteracy. This is an excellent initiative supported by plenty of scientific evidence.

But teacher unions and English organisations are trying to block this check with all sorts of misinformation and weak excuses. They say "teachers don't want to give more tests" when they give students spelling tests every week, which many fail. Or "young children should not be tested" when the South Australian trials showed the children enjoyed the 1:1 time with their teacher. Other excuses are "children should not have to read single words in isolation" when all F-2 children are subjected to memorising isolated "golden-magic words" daily. Another objection is that some items are "nonsense words", which is totally valid when children decode a word such as "fantastic" and

But teacher unions and English organisations are trying to block this check with all sorts of misinformation and weak excuses.

the second syllable is "tas". Others say the NITL 2005 is out of date, but that's false too when the alphabet, spelling and child development do not change over time.

There is no valid reason for each state not to implement the year 1 literacy and numeracy check; just ideologues' obstruction at the expense of the educational welfare of thousands of young school children. When South Australia trialled it, the children were not stressed by the five-minute check with their class teachers, who were satisfied with giving the test.

It is particularly difficult to understand when unions recently campaigned for more funding for kindergartens, praising "early intervention is best". Teacher unions do not understand that all teachers will benefit by having all students in their classes able to read, as would all employers, who've been complaining for years about illiteracy. And the public's respect for teaching would be restored.

Most importantly, another 70,000 six-year-old innocent children who, statistically, are doomed to illiteracy by year 3 would be noticed, given intervention and then be able to progress academically with their peers. Or will they be another education elephant in the room?

Jo Rogers is a semi-retired special education teacher and active advocate for those with learning difficulties who was a consultant member of LDA for over 20 years.

This article was originally published in the Sydney Morning Herald *https://www.smh.com.au/education/ideology-is-dooming-thousands-of-children-to-illiteracy-20180830-p500pk.html*

We welcome the submission of articles from LDA members and others with an interest in learning difficulties for possible inclusion in upcoming editions of this Bulletin.

Please submit articles, correspondence about the Bulletin, or letters for publication to the editor. For questions about content, deadlines, length or style, please contact the editor. (Email: pubs.media@ldaustralia.org)

Articles in the Bulletin do not necessarily reflect the opinions nor carry the endorsement of Learning Difficulties Australia.

Requests to reprint articles from the Bulletin should be addressed to the editor.

Consultants' Report

From the Consultants' Committee Convenor, **Ann Ryan**

As I sit and ponder where to start, my eyes are drawn to the flickering sunlight on the gum leaves, the soft late-winter light and the first shy head-raising of jonquils. Even though my garden has been sorely neglected during this very busy winter, it bounces back. There seem to have been many challenges on the LDA front recently, but looking out the window, I am reminded that it is all a part of the natural order – we have bursts of growth, time to enjoy our achievements, time to consider better ways, time to reflect and plan for further growth.

The specialist teacher consultant team welcomes two new members from Western Australia: Roslyn Tuia and Priscilla Carlisle. Our consultant numbers from states other than Victoria are growing steadily, increasing the reach of LDA practitioners across Australia.

Our challenge? We have a massive task ahead if we are to go anywhere near meeting the need for experienced specialist teachers across all cities and country areas. It is a daunting but exciting challenge – we welcome contact from any passionate educator, experienced with working with students with learning difficulties, armed with post-graduate qualifications in the field, with a penchant for evidence-based practice and a strong understanding of systematic phonic programs.

And yet we still ask for more! LDA Specialist Teacher Consultants recognise that literacy development is much more that phonics – we do hope you have had a chance to watch our President, Professor Anne Castles and Councillor, Dr Jenny Buckingham join with Mr Troy Verey to argue the affirmative side in a recent debate, Phonics in context is not enough: synthetic phonics and learning to read. Watching from home, I felt like cheering when Anne commented that 'phonics is the great equaliser'. But of course there is more to reading than phonics, and as a part of our daily work we are busy developing oral language, vocabulary, phonology, fluency, comprehension, attention and more, depending on specific areas of student need.

LDA Consultants know that numeracy difficulties can only be effectively remedied with the carefully guided use of concrete materials, that writing skill development is best addressed with a skill-based qualitative rather than a quantitative approach, and that any teaching needs to be carefully monitored for cognitive load if attention is to be maintained and learning is to occur. In a nutshell, LDA Specialist Teacher Consultants have a broad range of skills. But we are just a small group of many and we would like to grow our team. Thinking of applying? Please go to the LDA website and follow the links. Or ring our Consultant Administrative Officer, Elaine McLeish 0406 388 325, if you would like further information.

We celebrate our achievements, learn from each other (and sometimes guest speakers) and share collegiate support by participating in network groups. I was delighted to attend a recent Geelong network and to be inspired by this vibrant group of consultants, to hear new strategies of 'what works', to share in reviewing favourite apps, to be reminded of LDA practices and mission. Best of all, I was able to see inside Fay Tran's tutoring room! Fay is to be the inaugural recipient of the Rosemary Carter Award. This room reminded me of a Van Gogh painting with its calming blue walls, lively shelves of colourful resources, centrally positioned table, and a designated chair for the parent – yes, in the corner! Fay's focus is on the child, who has the most important seat in the room, directly opposite Fay. Such a simple plan, but such an important way to keep a child engaged while modelling best practice for parents. Rosemary Carter must be smiling from above. We value network meetings highly so that all consultant specialist teachers will be required to attend at least two network meetings to meet requirements to renew registration following the 2018/2019 year.

The new consultants page on the LDA website is another place to share consultant business. Minutes of Consultant Committee, the Consultant Support Group and network group minutes can be found here. The Consultant Support Group will meet on the 9th September, bringing together leaders from each network:

1. Beaumaris Shared leadership
2. Canterbury/Kew Leader: Diane Barwood.
3. Geelong Leader: Candice Macqueen
4. Glen Waverley Leader: Maureen Wickham-Kenneday
5. Ivanhoe Leader: Gerard Barry
6. Lower Templestowe Leader: Jan Roberts
7. Distance Network Leader: Ann Ryan

Most networks will be discussing the newly established Institute of Special Education (InSpEd) which aims to improve the quality of special education provision in Australia. You may like to explore this new initiative at https://www.insped.org.au/our-vision/. While many LDA Consultants may seek to become certified with InSpEd, as I have done, and work shoulder to shoulder with allied health professionals, LDA specialist teacher consultants will retain their position as leaders in the field of teaching students with specific learning difficulties.

For details about the process and requirements for becoming an LDA Specialist Teacher Consultant, please refer to the website www.ldaustralia.org