Volume 18 Issue 2
Originally issued as G1

Global Journal of human-social science: G
Linguistics & Education
Volume 18 Issue 1 Version 1.0 Year 2018
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-460x & Print ISSN: 0975-587X

Part 2: The Orthographic Face of Dyslexia

By D. Montgomery

Introduction - After the reading difficulties have been resolved most dyslexics still have residual spelling problems. Some dyslexics do not have any reading problems (dysorthographia) and may have learned to read self taught because of very good visual memories. Their severe spelling problems are seldom dealt with because they read so well. With hard work my students had gained enough GCSEs and A/levels to apply for a range of university programmes and in this case for the teacher education courses.

In order to help them with their writing a series of voluntary clinic tutorials was arranged as part of their Learning Difficulties/SEN course. At interview their spelling correcting strategies were found to be limited to rote learning of the correct versions, visualisation, look-cover-write-check, 'does it look right' and asking a friend to proof read what they had written before they handed work in. It was in exams that they became most vulnerable to detection for their own proof reading too often missed the errors.

GJHSS-G Classification: *FOR Code: 130399*

PART2THEORTHOGRAPHICFACEOFDYSLEXIA

Strictly as per the compliance and regulations of:

© 2018. D. Montgomery. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Part 2: The Orthographic Face of Dyslexia

D Montgomery

I. Introduction

After the reading difficulties have been resolved most dyslexics still have residual spelling problems. Some dyslexics do not have any reading problems (dysorthographia) and may have learned to read self taught because of very good visual memories. Their severe spelling problems are seldom dealt with because they read so well. With hard work my students had gained enough GCSEs and A/levels to apply for a range of university programmes and in this case for the teacher education courses.

In order to help them with their writing a series of voluntary clinic tutorials was arranged as part of their Learning Difficulties/SEN course. At interview their spelling correcting strategies were found to be limited to rote learning of the correct versions, visualisation, look-cover-write-check, 'does it look right' and asking a friend to proof read what they had written before they handed work in. It was in exams that they became most vulnerable to detection for their own proof reading too often missed the errors.

Another problem identified particularly amongst the mature students was an inability to present what they knew in a way that would gain them good marks towards their B.Ed and MA qualifications. When this was investigated it was found that they had had no training in study skills and how to structure and write an education essay or essays in general. This was easily dealt with by study skills tutorials and incorporating study skills into the learning programme supported by a study skills book with examples for use in schools (Montgomery, 1983).

The results were that these students who had failed in their previous exams all passed comfortably and were able to modify the techniques and apply them to their other subject areas. It is typical that dyslexics and many others from disadvantaged groups need help with such skills. This is possibly because during their learning history their brain is so engaged with decoding the words and making sense in the process that they miss grasping the overall schema and deep text structures that others acquire implicitly. Wider problems with organisational skills can also be an associated problem.

Gifted underachievers from disadvantaged back-grounds can also miss out on learning such skills. This is because they have such good recall that in the early years they do not have to study texts more assiduously to find the structures and meaning. It is very often only at degree level that they begin to fail as memory is not the only requirement for success. There is too much even for them to remember so that strategic approaches become essential to identify principles and hierarchies of knowledge.

II. Development of the Cognitive Process Strategies for Spelling

Method: Using Delphic Oracle methods (Sumsion, 1998; Iqbal et al, 2009) college staff involved in teaching literacy were consulted to find out the methods they used to help students in a formal way. However this amounted to little more than the following: 'always proof read your work', 'use a dictionary', 'refer to this (obscure) Latin or Greek rule', 'at school we learned dozens of rules and I apply them'. None of these suggestions seemed to have helped their students improve the spelling and their written comments on essays were often negative and irritating. Thus a new and more positive way was needed.

A list of strategies was invented that did or might assist in correcting misspellings and had been used at some time by the investigator. These worked out to a set of 12, and became the so-called 'brain engage' or CPSS 'cognitive strategies'. It was intended that they would serve as less laborious alternatives to the major rote learning procedures, mnemonics, visualisation and singing and rhyming techniques that were used.

A set of 20 difficult to spell words was selected and 12 of them could be deliberately misspelled to mislead. They were presented visually and were also read to classes of students on ITT and CPD programmes. The students' task was to try to spell the words correctly and as they did so reflect upon the meta-cognitive strategy or strategies they had used to find it.

Once again the limited range of most of the students' strategies was apparent. They syllabified, used phonics and analogies with known words, wrote it then tried to assess if it 'looked right'. Some used meaning and the knowledge of another language. Many again suggested how useful mnemonics could be. However it was explained that finding a mnemonic (a verse or device for aiding the memory) was often a lengthy process and then only corrected the one misspelling making it not so useful as they might believe. Strategies were needed that would generalise to a range of words and misspellings. The emphasis needed to be on the strategy not the process of finding it.

Author: e-mail:dmont507@aol.com

© 2018 Global Journals

From the outset 12 CPS strategies were devised and in all the feedback from the misspelling tests no more than these 12 strategies were recorded. The best spellers appeared to have the largest range of strategies. Each year over a 4year period the misspelling test was given and the results analysed so that over 1700 undergraduates and 2000 post graduates were tested and confirmed the first set of results (Montgomery, 1997 a).

The second phase was to provide an explanation to show how the strategy could be used and the teachers would then have a general toolkit to use to help their pupils and their own spelling development and correct misspellings. However teachers regularly complained that they would help an ordinary pupil or a dyslexic correct a misspelling on one day only for them to have forgotten it the next. They suggested it was an indication of the dyslexic's working memory problem forgetting normal learners 'lost' the corrections equally as well. This meant that there were deficits in the traditional methods they were using that were failing the pupils.

The 12 CPSS were defined as follows:

a) *Lower order strategies*

- *Articulation* - The misspelled word is clearly and precisely articulated for spelling - citation mode
- *Over articulation* - The word is enunciated with an emphasis on each of the syllables or unstressed sound. e. g. parli (a) ment, gover (n) ment, w(h)ere
- *Cue articulation* - The word is pronounced almost incorrectly, e. g. Wed -nes - day, Feb - ru - ary.
- *Syllabification* - The word is broken down into syllables, misdemeanour - mis / de / mean / our,
- *Phonics* - A comprehensible articulatory skeleton or word scaffold is made to build upon – km, cm then cum, may appear before come.
- *Rule* - A few rules can help unravel a range of spelling problems e.g. the l - f- s rule, these letters are doubled in one-syllabled words after a short vowel sound - ball, puff, dress. The 12 exceptions are made into several sentences e. g; "YES, the BUS runs on GAS PAL, IF you pay NIL you get turned off.

  I before E except after C – receive, perceive

b) *Higher order strategies*

- *Origin* - The root in another language may give clues -op / *port* / unity; an opening, a *port* or a haven
- *Linguistics* - Syllable types open, closed, accented and unaccented need to be taught as well as the 4 suffixing rules which govern most words e. g. Add, Double, Drop, Change
- *Family/base word* - Family helps reveal silent letters and correct representation for the 'schwa' unstressed vowel e.g. Canada, Canadian; bomb, bombing, bombardier, bombardment; sign, signature signal, resign. Basewords can make families of words e. g. form, reform, forming, deformed, formation
- *Meaning* - Separate is often misspelled as sep / e / rate. The dictionary meaning shows it means to divide or part or even to pare. The pupil then just needs to remember 'cut or part' and 'pare' to separate.
- *Analogy* - comparison of the word or the key part of it with a word the pupil does know how to spell. e. g. 'it is like boot - hoot, root' or 'hazard' is one 'z' like in 'haze' and 'maze'
- *Funnies* - Sometimes it is not possible to find another strategy and so a 'funny' can help out e. g. 'cess pit' helped me remember how to spell 'necessary'.

Why 2 strategies are needed to correct a misspelling

At this point it became obvious why the Look-cover-write check-strategy on its own did not work in remediation but might work in learning new spellings. In remediation the incorrect version was already stored in the lexicon (word memory store) and needed a CPSS to correct it. It also had an entry in the motor memory and it too had to be corrected by LCWC. The idea was to giveit a higher profile than the error spelling so that the corrected version would come out first. Over time and practice it should take precedence over the error version and not need the further use of CPSS. The word in the lexicon (word memory store) has to be consistently associated with its motor memory (motoreme).

The 7-step protocol for using CPSS:

Younger pupils and those with poorer spelling will need more of the first six CPS strategies and little or no dictionary work to begin with.

i. The pupil selects two misspellings to learn in any one session.
ii. The pupil identifies the area of error, usually only one letter with help of the teacher or a dictionary.
iii. The pupil puts a ring round the area of error and notices how much of the rest is correct.
iv. The pupil is taught (later selects) a CPSS to correct the misspelling, a reserve strategy is also noted where possible.
v. The strategy is talked over with the teacher and is used to write the corrected spelling.
vi. The spelling is checked to see if it is correct - the dictionary can be used again here.
vii. If correct the pupil covers up the spelling and writes the word three times from memory in joined up / full cursive, naming the letters (Simultaneous Oral Spelling (SOS).It is especially important to use the joined script at least over the area of error if full cursive presents a problem.

Why cursive?

Research by Kuczaj (1979) found that the motor programmes for spelling words, particularly their bases

© 2018 Global Journals

and affixes were stored together in the brain. This meant that learning to write syllables and base-words as cursive writing units during early learning is an important strategy and could contribute to spelling accuracy. The posterior frontal lobe area (usually left hemisphere) organises and initiates the voluntary motor movements involved in forming the individual graphemes and syllables. These are stored in the motor memory and available to be called up during writing. Over time and practice this process becomes automatic so that during essay writing we do not have to think about the details of the spelling.

The problem arises when, as young writers or dyslexics we store incorrect spellings. In order to correct them we have to address the error both in the word memory store and in the motor memory store. The CPSS corrects the error in the lexicon and the SOS strategy is needed to correct it in the motor memory. As old memories are not deleted but persist but fade if not used they also will be called up initially when writing. The CPSS however gives the new spelling a higher features profile for recognition and as the writer writes a sentence and the 'problem' word comes nearer 'warning bells' ring and the writer recalls the strategy, slows down and writes the correct version.

Soon the writer is able to write the correct version without having to pause and recall the strategy. Eventually the correct version arises each time unless under stress when it may pop up again. On these occasions proof reading will clear it out.

III. CPSS in the Ordinary Classroom

An early research project by Parrant (1989) showed effective results in 6 weeks with classes of 11 year olds. The control class of 23 pupils and the experimental class of 21 pupils, including 7 with specific learning difficulties in reading and spelling were given a 100 word dictation pre and post intervention. Each week they worked on a set of common errors from the dictation. The control group were taught to use Look-Cover-Write-Check and write the word correctly three times. The experimental group tackled the same errors with CPSS, writing the word correctly three times. Both groups' spelling improved but for the controls there was not a significant gain but the experimental groups' improvement was significant ($p < 0.01$). Even the group with SpLD improved their spelling significantly ($p < 0.05$). The error rate of the experimental group dropped from 273 to 162.

Parrant also recorded a change to a positive attitude to spelling in the experimental group. They were more interested in spelling and more confident in their writing after the intervention. This became the encouragement to develop the 'Spelling Detective' approach to encourage young learners become problem solvers and lose their 'learned helplessness'.

An investigation of the types of spelling errors made by undergraduate teacher education students in a 3-hour exam was undertaken. All 55 scripts were analysed. There were 165 errors in total and 152 different errors. The estimated number of words was about 3000 words per script making 165,000 words in total giving an error rate of 0.001% and a modest writing speed of 17 words per minute, taking into account that thinking time was heavily involved. The main difference between the Year 7s in 2008 and these undergraduates (1997a) was that in developmental terms the school children made slightly more errors of a basic or lower order kind such as with articulation and phonics and in their grammatical knowledge. Even pupils classified in school B as having SEN, mostly with specific learning difficulties, showed the same types of errors as the rest of their cohort. They also showed a profile of spelling development typical of younger children when compared with results from Year 5 cohorts. In other words their misspellings were not 'bizarre' but merely typical of younger children learning to spell.

The clinic work with the undergraduates showed that when their Year 3 and Year 4 exam script errors were analysed, the remediation had been effective and all of them were removed from the 'dyslexia danger list'

IV. Further case Examples in Spelling Interventions using CPSS

Since the early CPSS studies the remedial spelling technique was included in the MA SEN and MA SpLD/Dyslexia Distance learning programmes at Middlesex University, London from 1995-2010 and the data collected and analysed. The method was proving successful in the hands of others and examples were included in a variety of articles and books e.g. (Montgomery, 2017*)*. Some examples follow below. The most recent evaluation has taken place with 60 members of Potential Plus UK (Montgomery, 2016) the former National Association for Gifted Children (NAGC - UK) in which gifted children gave samples of their handwriting in a 10 minute essay test that equally revealed their misspellings. Advice was give on both to try to help them overcome underachievement.

1. Casework with Carl aged 9 years 11 months (MA SpLD student)

Carl had a spelling age of 8 years 4 months and was diagnosed by an educational psychologist as 'moderately dyslexic'. He was given a 100 word dictation from his Harry Potter reading book. He misspelled 12 words and identified 5 of them:- monning (morning); itsalf (itself); bewiching (bewitching); foled (followed); turbern (turban).and :- cristmas, midde, coverd sevulal, foled, punshed, thay In the period of a fortnight they dealt with his errors Lesson One follows:-

Christmas: Carl missed the 'h' in this word and said he sometimes missed the 'r' as well.

© 2018 Global Journals

Cue articulation: 'We pronounced the word 'Christ mas'. We talked about the fact that Christmas is all about Jesus i.e. Christ. We looked up 'mass' in the dictionary and discovered that it can mean a meal or a body and that at Christmas we have a big meal to celebrate that Jesus came to earth in human body. Carl had never realised the word 'Christ' was in Christmas.

'Funny': As soon as I spelt this word correctly Carl said 'Oh look my brother's name" Carl has a brother called 'Chris' whose name he can spell quite happily so it really helped him to remember that the name 'Chris' is in 'Christmas'.

SOS: He found it quite hard to make himself use the cursive writing at first but said it got a lot easier as he repeated the word. He also found it easier to remember the spelling if he shut his eyes.

Followed: Carl spelt this as 'foled' Syllabification: Carl needed help to see how the base word 'follow' can be broken down into syllables, then he spotted the word 'low'

Analogy: He was able to think of a rhyming word for 'foll' i.e. 'doll'

As soon as I mentioned the past tense he remembered he needed an 'ed' ending.

(After analogy with doll it might have been useful to introduce the l-f-s rule and/or doubling after the short vowel sound)

At the outset of lesson two he spelt the two words correctly and he and his teacher proceeded with the next two words. After the six sessions he was given the dictation again and Carl correctly spelled all the 12 target words. Initially he resorted to the former spelling of 'covered' and 'punishment' but in both cases he immediately realised his error and self corrected. He was quite hesitant over 'several' but got it correct after some thought. He initially put 'terban' for 'turban' but corrected it immediately. His writing in the post test was more joined.

Another dyslexia tutor explained:

'Many of the students I work with have been following dyslexia spelling programmes with private tutors for years with little or no improvement in their ability to spell accurately when under pressure especially in a test or exam. When I first read about CPSS I was a little dubious as it seemed a time consuming way of teaching students correct spelling however I was desperate to find something which would work after years of repeatedly correcting the same errors'.

'it did not take long for my experimental student to feel confident about what she was doing..... it has been an extremely positive experience as it really helped raise her self esteem as well as improving the accuracy of her spelling.....I have now introduced the CPSS to all the classes I teach.'

'The 15 Spells'

According to Hanna and Hanna et al (1966) it is possible to spell 85 per cent of the English language with knowledge of phonics and some basic rules although spellers complain that it is a very irregular language to learn. These researchers found that it was possible to programme a computer to spell 17,000 basic words with some 300 rules and knowledge of how sounds are transcribed and represented by alphabetic symbols - phonics.

However they were dealing with rules governing letter order and frequencies often called 'surface rules' rather than with deep structure rules about word and syllable structure, morphemics and linguistics. Henry (1997) in the USA suggested that with a knowledge of roots the rules governing only 14 words could teach all the spellings that an elementary school child might be expected to know. Her techniques were based upon different syllable structures but not a problem solving approach and were laborious. However these studies led to the idea of finding a set of words in a topic or subject area that would illustrate enough linguistic information to lead to the correct spelling of a large number of words. It was in this manner that *the 15 Spells* were identified.

The '15 Spells' represent 15 words and their structures and rules that when they are understood can lead to the correction of 20,000 or more misspelled words. This is because the English language is much more regular than people think. These interventions are more specialised and based on linguistics and morphemics but some are memorable and children like them. It gives them a feeling of power.

Pupils responded very well to these insights even from an early age and case examples from a range of subjects have been used to illustrate this. These interventions can also be made into mini - lessons in class by English teachers and any other teacher who compiles a topic - based list for their subject area. As a school policy underachievement on a wide scale could be lifted by improving spelling and handwriting.

With better handwriting teaching linked to CPSS and the 15 Spells we may be able to reduce barriers to learning and significantly lift achievement. Although many English spellers have learnt to spell accurately without ever having any knowledge of morphemics or linguistic rules, when they are introduced to them it can give them a special interest and pleasure. Spelling teaching instead of being laborious, a 'spelling grind', can be enjoyable and flexible more like a problem solving piece of detective work.

With this principle in mind it was discovered that about 15 words were needed to do this in English. The idea is that every school should develop a policy towards spelling which includes CPSS and every subject teaching area should convert the principles and practices in the 15 Spells to their own subject area

© 2018 Global Journals

vocabulary so that all the teachers would be reinforcing the same approaches rather than rely on sight word training alone.

The most useful No 1. CPSS are the 4

Suffixing Rules – Add, Double, Drop, Change and these are spelled out below:

Double and Drop are the most frequently needed.

1. You must teach the Short vowel (CVC) words and the DOUBLING rule: e.g. hop. run, sit, tap, pot all contain the short vowel sound. If we add anything to a single syllabled word after a short vowel we must double the final consonant – hop p-ing, hop p-ed, runner, running; sitting, tapped, potting, potter, stopping
2. Long vowel sounds are denoted by silent 'e'. The DROP rule: If we hear the long vowel sound in a single syllabled word it is denoted by a silent 'e' at the end (CVCe). To add an ending we must drop the final 'e' and just add the ending e.g. hope – hop ing; tape – taping; rope – roping; have – having, love – loving, come - coming

We can also apply the rules to other longer words: accommodate, acomodate or accomodate? (Prefix ac-) commo - Apply the rule – which is the correct spelling?

3. *ADD Rule:* When adding consonant suffixes to whole or basewords we can just ADD the suffix unless it changes the meaning e.g. king-ship, man-ly, care-less, wood-s, dry-ness, play-ful, forget-ful Suffix –ly. This suffix means like (kingly), how (slowly) or when (lately). We simply ADD it after words ending in silent 'e'.

- *Deliberate – ly* This word ends in silent 'e' so just ADD the consonant suffix – deliberately.

There are a few (8) that do not obey this rule e.g. "Truly Mr Duly your ninth argument is wholly awful" Also - judgment and acknowledgment.

4. *Change rule – change y to i when adding a suffix:* For example pay –ed change to paid, say-ed to said Mystery – mysteri – ous.

The following is a list of the 15 KEY WORDS built round a trip on a Thames Sailing Barge which pupils from around the country can go on from Essex. They can be changed to fit topics on the Victorians, the Elizabethans and the Second World War in History or topics in Science, PE, Art, geography, and technology or can be devised for year groups and so on.

The '15 Spells' (e.g. for a barge trip)

1. *Cut* (cvc) short vowel, closed syllable. DOUBLING rule for adding suffixes - cut-t-ing, putting, running, bedding, hopping, sitting, in polysyllables - rudder, potter, kipper, cutter
2. *Hull* (cvcc) short vowel and l-f-s rule. Must double l-f-s after a short vowel in single syllables till, hill, pill; off, boff, sniff; hiss, miss, (some exception words - if, gas, bus, yes).
3. *Rope* (cvce) After long vowel sound in closed syllable, silent /e/ denotes long vowel sound. DROP silent /e/ when adding suffixes:- roping, hoping, riding.
4. *Sail* (cvvc) 'When two vowels go walking the first one does the talking, usually' rain, paint, cleats, load, tear. bear Just ADD suffix - raining, painted, cleated, loads.
5. *Cook* (cvvc) book, look, took, hook, good, double /oo/ short vowel sound, ADD
6. rule, cooking MOON (cvvc) Long vowel sound /oo/ in noon, cool, saloon, zoom, room, tool, ADD rule - zooming
7. *List* (cvcc) short vowel followed by double consonants simply ADD rule applies - listing, rushed, missed, rusting, posted. Master, lasting,, faster, bath - dialect change in south of England from short to longer /ar/ sound
8. *Barge* (vowel r, ge) r changes a in words large, are, art, mart; e softens g-ge
9. WHEEL (wh digraph) teach /wh/ question words as a group. Teach the 6 consonant digraphs ch, ph, ch, sh, wh and th voiced and unvoiced.
10. *Laden* (cvc/ic/id/in) open syllables:. These words follow the long vowel rule in open syllables – o pen, ba con, spo ken, la den, to ken. Exceptions are: cabin, robin, rapid, vapid probably pronounced with the long vowels once or the effect of vowel 'i'
11. *Water* (wa /or/ and wo /ir/ rules. W changes the vowel sounds of 'a' and 'o' - war, ward, walk, warm. Work, world, whorl, word, worm, worst
12. *Pay* (cvy) CHANGE rule. Change y to i when suffixing. Instead of the regular form payed and sayed we change 'y' to 'I' and add 'd' - paid, said, laid.
13. *Round* (diphthong /ou/ow sound is ah -oo or two sounds) ground, bound, found, sound, hound. rouse, louse; row, cow; oi diphthong in oil, boil, toil. ow is also a digraph low, row, know
14. *Sign* (cv - gn, silent letters) Family words will help with detecting some silent letters - sign, signal; bomb, bombardment. Some letters were once pronounced knife, knight, knave, knitting.
15. *Cable* - final stable common syllables e..g. '-le' and '-ly'; '-tion, '-sion' and '-cian', '-us' and '-ous'
16. *Pair* '–air' and '-are' words. Pair, lair, stair and pare, stare, ware (N.B. Mnemonics are no part of the system because they do not have the power to generalise to new words and are laborious).

Some examples of case work with John PhD aged 56 (2015)

1. *Other Useful Rules – final stable syllables (Cowdery, 1994).*

- Typical or typicle?

a. le is a final stable syllable for the sound 'L' at the end of words

© 2018 Global Journals

It is the most frequent one used at the end of words so when in doubt use –le.
Use –le after a 'stick' or a 'tail' subtle, puddle rabble, gaggle, trouble, apple, raffle.
Use –le in 3 and 4 syllabled words particle, capable, legible, noticeable, pinnacle

b. el is also a stable final syllable and less frequent for 'L' at the end of words.

Use –el when there are no 'sticks' or 'tails' before the 'L' sound e.g. tunnel, funnel, trowel, bowel, towel.
Use –el to keep 'c' and 'g' soft e.g. cancel; chancel, angel

c. al is also a less frequent final stable syllable for 'L' at the end of words.

Use –al after whole words e.g. music – al, tropical, electrical, political, seasonal, sensational. portal
Use –al after adjectives (describing words before nouns) e.g. local, central, regal, total.
Use –ical and –al after silent 'e' words e.g. type – typ – ical but you must DROP the silent 'e' recite – recital,

d. A tiny number of words may need a 'funny' e.g. bridal - no dal-liance there!

2. *Basewords*

Most of the words we use are built on a baseword e.g. FORM is the baseword for form, formed, reform, deform.

- proposition or propersition? .To correct this spelling we need to use its baseword PROPOSE as the guide to spelling PROP -O-sition

3. *FUNNIES (or stories) and 'L'*

- *principal or principle?* The principal is a person or a PAL. The principle is just a rule.

4. *MEANINGS*

- dis- or des- at the beginning?

Dis- is a prefix. Learning the meaning of the prefixes we put in front of words can help. Prefixes such as dis-, re-, pre-, pro-, ab-, anti- etc.
The prefix 'dis' means 'in two' or 'the opposite of' e.g. agree and disagree; order and disorder; trust and distrust.
'des' is not a prefix but 'de ' is. It means down, from or away and is used on words derived from Latin e.g. describe de – scribe; de-stroy, de – liberate, de-form, de-struct.
It helps if when saying these words for spelling that you use 'CITATION MODE' that is articulating very clearly and precisely for spelling to distinguish e.g. between dis – turb and de – struct.

5. *Articulation* - citation mode

- Im-port or em –port? These prefixes mean 'in' and 'into' and depending on context are interchangeable with 'in' and 'en' e.g. engage, invade, import, emblazon.

One of the best ways to remember which is correct in context is to ensure that citation articulation mode is used. This means in everyday speech the correct articulation is used e.g.
IM – port; IM-personal; EM – bargo, EM-phasis; IN-trigue, IN-correct; IN-vert; IM-minent, IM-pede, IM-perfect.

Can John hear and feel the articulatory differences between these prefixes? Does his ordinary speech allow him to note the differences?

6. *Origins*

There are only a few words like 'relevance' and 'relegation' that can cause problems. First look up the word in a 'good' dictionary. It will give you 5 things – spelling, pronunciation, meaning, origin in other languages, related words.

- *Relevant* - RE is the prefix meaning 'again' or 'away'. The word re--levance comes from the Latin 'levans' to raise up or levitate so we must spell it RE-LEvant.

The word 'relegate' comes from the Latin RE – LEGARE meaning to banish or send away. RE – away and LEGARE to send.

- Mitigation miti or mita? Look up the word in the dictionary. It comes from the Latin 'mitis' meaning MILD. I would use the origin and the 'mild' story to remind me how to spell MITIGATION

7. *Phonics*

These are the 44 sounds of the English alphabet. Sometimes two letters represent a single sound (e.g. 6 digraphs ph, th, th voiced, wh, sh, ch and 15 vowel sounds ea, ei ae etc).

There are also some rough generalisations that we learn implicitly during reading and that sometimes need to be taught to dyslexics e.g.

- Desent versus decent? If we hear and feel the soft 's' sound in the middle of a two syllabled word it is usually represented by 'c' (c does not have a sound of its own it is either 's' or 'k') thus decent, recent (decens and recens are words derived from Latin).

If we hear a 'z' sound in the middle of such a word it is usually represented by 's' e.g. de-serve, re-serve. The clue here is also the base word 'serve'
If you put 's' between two vowels it usually says 'z' deserve, reserve, rise, use.

8. *Cue Articulation*

- Recruit or recrute? There are some words that do not respond to logical analysis. 'Recrute' is an Old French spelling but how it changes is not clear. As there are only a few such words I would use a 'cue articulation' strategy. This means that I would say it as RECRU-IT as I was spelling it and thinking about it. Pursu-it is its friend.

9. *Over Articulation*

- First or fist? To detect the almost silent 'r' in words such as 'first' and 'burst' it helps to practice over

© 2018 Global Journals

articulating them to support spelling. The Scots are very good at this hidden sound and roll them 'rr'.

Thus John's 12 misspellings have revealed a need to extend his strategies for spelling. 9 out of the 12 CPSS have been used to illustrate this. The rest takes us into the realm of useful linguistic rules. There are many rules that govern our spelling system but some have a wider applicability than others and over time and the case work on error interventions such as with John the most useful have emerged.

Casework with some younger writers using CPSS (Montgomery, 2016)

2. *Louise 6 years 5 months*

Transcript

'Once upon \a time in a far away land lived a mer queen and a mer king. They had a littel girl called Pearl. Pearl was a beatifel girl but Pearls sister was very mean. Pearl did'ent like her xx sister but she dident mind. One day Pearl's evil antie made a postion to kill Pearls mum. Years later Pearls got rggttose by the minet. Pearls stepmother dide'nt know her mum gave Pearl the most preshers shell in the whole world. Pearl had lots of frends but her best frend was called Carle'

Louise writes at a speed of 8.3 words per minute, She is right handed and uses a thumb over grip. This speed is in the average range. She has made 8 different spelling errors apart from one or two squiggles that could not be read from the copy. There were 12 errors over all. The different errors were:

Dident, littel, beatifel, frends, antie, postion, minet, preshers

This is more than she should be making given her age and high ability although they might be more typical in an average learner

To correct these misspellings take just two words at any one time and choose the most common words first e.g.

Dident: Explain that the base words are 'did not'. In running speech we say "did-nt' . Get her to articulate it as "did-nt' and explain the comma is to show a letter is missing and should be in the place of that letter.

Little: In speech we say "litl". Ask Louise to say it correctly for spelling. The final 'l' sound in words is represented by the stable final syllable –le. It is the most common spelling for the 'l' sound at the end of one-syllabled (one beat) words e. g. litt-le, bubble, trifle, maple, ripple, table

Beatifel: Louise has nearly spelled this difficult word correctly. Get her to say it first as she has spelled it e.g. "beat – i – fell". The baseword is 'beauty' - person full of beauty. The French origin of the word is 'beaute' (Think of 'beau; a man attentive to dress such as Beau Geste). Ask her to syllabify and say it correctly as "beaut-i ful".

Frends - this is a common misspelling at this age. To remember the silent letter an easy method might be to try a 'funny' . "I am going to fry the ends of my friends' and cue articulate it for spelling as "fri-ends".

Antie - If she says this as she has spelled it "ant – ie" she will hear and feel that something is missing. Again the 'u' is needed to draw out that sound. 'Auntie needs an uncle to help her out'.

Minet- This word is spelled in the same way as something very small but is pronounced differently e.g. mi –nute 'A minute is very small, it is minute'.

I would not intervene on the other misspellings at this stage unless they reappear in other pieces of writing. If they do then:

Postion – first say the word as she has spelled it 'post – i – on' or 'pos – shun'.

If the word is 'poison' it uses the second sound of 's' and that is 'z' as in (poi- zn).

An alternative reading may be that she intended to write 'potion'. In this case she needs to syllabify the word 'po – tion'. This is the open syllable po- with the long vowel sound. The final stable syllable '- tion' is the most common spelling of the (shun) sound at the end of words. Attention, mention, intention, traction, faction, reaction

Preshers- this is something valuable, it has a high price. Use 'price' to remind Louise that the spelling of 'precious' also has the soft second sound of 'c' in it, then syllabify for spelling 'prec – i – ous'.

In the case of a gifted 7 year old it can be expected that reading and spelling are at the level of about a 9 year old. If such a one produced writing with these misspellings it would raise concerns about the quality of the learning environment and/or potential dyslexic difficulties. If Louise has such difficulties she has done extremely well to make this amount of progress. Her work needs careful monitoring.

3. *Alexander 7 years 10 months Right handed Rigid tripod grip IQ 137*

Information provided by parent:

- Has always avoided activities involving writing. However, always very neat at colouring (He won a prize in Reception for genuinely very neat colouring)
- 'Meltdowns' during Reception and Year 1 when asked just to write just his name on a card at home.
- Episode of significant distress at school during Year 1; told the teacher that he couldn't get what he wanted to write from his head onto the paper.
- Has consistently told us that he doesn't like the feel of the paper; also refuses to write after washing his hands until his hands are completely dry.
- Has refused to use a pencil at home, with preference for a pen.
- Prior to Year 3, used a pen with a rubber on the end so that he could rub out any mistakes. In Year 3, started to use a mechanical pencil that looks like a

© 2018 Global Journals

pen, and then moved onto a 'hexagonal' grip pencil (rather than a rounded grip pencil).
- Repeatedly sharpens pencil, so that it is as sharp as it possibly can be (generally a few times within just a few minutes; pencils don't last long).
- Has always preferred to print letters.
- Has previously refused to write cursive letters; "Mummy, I don't like the silly squiggles"
- Teachers' attitudes in Years 1 and 2 was that any writing is better than no writing.
- Alexander is in top set for English in Year 3 and is now expected to write cursively (but no help is being given at school).

Other information
- Very early reader (could sign words before saying them)
- "Streets ahead" according to Reception teacher when first started
- Verbally articulate

Transcript - Football

Once apon atime a footballer lived with his wife in a mantion of a bildnd. But one day some antieces went missing! The footballer called the polece. They came in two seconds tlat! Then they called a Decetive. He serced all arond until he called are you sure you bought them!Owe he said I fogot I was gowing to get them for Christmas but I forgot! The end

Dear mummy I had a relay good time In Denmark. The montains Here are superb! I wish you could be heer. See you In two weeks.

Love Alexander

Alexander's writing 7 years 10 months Spelling skill: 16 spelling errors. This is a higher error score than average approaching 15 errors per 100 words. The HMI criterion is that the pupil shoiuld make no more that 5 errors per 100 words by Years 6-7 and younger pupils such as Alexander will make more perhaps up to 8 or 10 per 100 so a score of 15 is of concern. It will of course be affected by the level of difficulty of the words selected.. e. g, antiques, mountains. A list of his misspellings:

apon, atime, mantion, bildnd, antoeces, polece, tlat, Decetive, serced, arond, Owe, gowing, relay, montains, heer, nue (fogot and forgot)

Given his high IQ we should expect that he would be writing at a speed of 15 words per minute and spelling correctly all the words he uses in this piece of writing.

The overall impression given the high ability, early verbal ability and early reading competence, plus the overlarge and spiky writing put together with the meltdowns, and some rigidity of responses, the oversensitivity to the feel of paper etc. suggest he might be just on the Asperger dimension.

Premature babies (details in the communications) are more vulnerable to a range of difficulties and the patterns of them are very individual. Given Alexander's undoubted ability he will learn to overcome them.

However I think the next few years may be critical for him. We want him to settle and enjoy what the current school is offering and also think about getting him ready for the transition to secondary school which may not be easy.

Spelling skills

Transcript *Football*

Once upon a time a footballer lived with his wife in a mansion of a building. But one day some antiques went missing! The footballer called the police. They came in two seconds flat! Then they called a detective. He searched all around until he calledare you sure you bought them! Oh he said I forgot I was going to get them for Christmas but I forgot!

Errors: apon, atime, mantion, antoeces, polece, tlat, Decetive, serced, Owe, gowing,relay, montains, heer, nue

- These errors show a good vocabulary that because of his reluctance to write has not developed as well as could be expected. Only two errors at a time should be addressed and checked to make sure the strategy has been effective.
- The first thing to improve spelling is to ensure that Alexander speaks clearly. He needs to practice citation mode for spelling. Listen to his ordinary speech to check he does pronounce words correctly e. g 'uh-pon' not 'a-pon'; 'fl – at'
- He needs to learn to syllabify longer words for spelling e. g. *de – tec –tive*
- Basewords. Many words belong to a FAMILY or have a base word that tells you how to spell them. So it is important for Alexander to discover the basewords in a paragraph of a story he is reading. He can use a marker to underline or put a ring round the baseword. This can begin by word processing his Football story with correct spellings to see if he can find any basewords: - especially

Build; search; go; real

- There are also compound words such as foot ball; Christ's mass; for-got; up-on. Two proper words make up a new one.

As can be seen beginnings and endings are added to some words to change their meaning beginnings are called PREFIXES (a-, ab-, anti-) and add-on endings are called SUFFIXES (-ing; -ed; -er etc.). These that Alexander has used are the most frequent. There are also 4 main rules that apply to Suffixing – ADD, DOUBLE, DROP, CHANGE. These may need to be addressed later if you will collect a list of his common errors.

- To remind him how to spell POLICE I would encourage him to use a 'FUNNY' and MISARTICULATE it as PO – LICE.

© 2018 Global Journals

- I think the only other error I would address at this point is the diphthong 'OU' in e. g. mountain and around. The sound of 'OU' in words is 'AH-OO'. Check that he can hear it and make the sounds clearly. Can he then reread his piece of text and find the two 'OU' word in it?
- Next get him to try to generate some more 'OU' words and keep a collection of them. How many can he find? E.g. round, found, sound, mound, pound, compound; mount, fount. Can he invent a sentence to include at least four of them to aid memory?

Save the next two misspellings until the need arises:

- There is one other letter combination that makes the AH-OO sound and that is OW but only half the time e. g. COW, CLOWN, TOWN, DROWN, HOW, NOW (how now brown cow)
- In other words OW makes the long vowel 'o' sound e. g. show, mow, row, throw, tow, grow

The parents were then given details of CPSS, the 7 step protocol and SOS with explanations for why they are needed.

4. *Charlotte 8 years 5 months*

Transcript

Once upon a time there was a small Karmarlo(?) called Sunny who was quite famos and wanted to discover what humans were "they are Big for one thing" hissed a snake and very tasty to a dirgo(?). But I'm not a dirgo" Sunny iameditly replied " That my friend is erelivent so screw your head back on you wanted to know.

"But I dident ask you" he shouted, Well I Can Read Minds!" snake yelled as loud as a rock hiting a planet at high speed eavery thing in the whole world was silent you coud heare a rein drop hit the ground but soon after a stange//

Suggested spelling interventions

1. Ask Charlotte to proof read her piece of work to see if she can identify and correct any of her misspellings. If so she should put a ring round the area of error and concentrate on correcting that segment.

Only tackle two errors in a session and ensure she has learnt them securely before moving on. Tell her she is going to learn to be a 'Spelling detective'

2. She misspells dident so needs to say the word correctly for spelling in citation mode – 'did not' did-n't.

Some of her errors result from using an advanced vocabulary and she will gradually acquire the correct versions from contact with print. Some need correcting now but go carefully in case she is not yet ready.

The vowels have two different sounds a short sound and a long one in which the vowel 'says its own name' as in A E I O U

3. *Hiting* – Can Charlotte detect the short vowel sounds in one-syllabled words – hit, cap, run, hop as opposed to the long vowel sounds in hite, cape, rune, hope?

HOP and HOPE

If so, the RULE is that after the short vowel sound (in a closed syllable –CVC) when we add –ing then we must DOUBLE the consonant e. g. hit-t-ing, hop-p-ing, run-n-ing and also hitt-er, hopp-er, runn-er.

The silent 'e' at the end of the word 'hope' is to tell us to make the long sound of 'o'. When we add –ing to this word we must drop the silent 'e' and just ADD –ing e.g. hop-ing, mak-ing. (These are called suffixing rules and there are 4 main ones –ADD, DOUBLE, DROP, CHANGE.)

She could try counting how many examples there are of the doubling and drop rules in a page of her reading book to help remember the strategy.

4. *Heare* – this is an over generalization of the long vowel/silent 'e' rule. When 'two vowels go walking the first one does the talking' (CVVC) and they make the long vowel sound anyway and so we do not need the silent 'e' to tell us this.
5. *Eavery* – 'ea' is the long vowel sound (two vowels going walking). Spell 'very' and just add the short vowel 'e' as in 'e-very'
6. *stange* – this may be a slip of the pen or a slight articulation error. Check that she pronounces the 3 letter blend 'str-' correctly and can feel the difference in the mouth between 'st-' and 'str-' and also hear it.
7. *Famos* – this is a nearly correct spelling. The BASEWORD is **fame.** There are three spellings of the 'us' sound at the end of words – us, -ous and –ious.

- After nouns we use –us e. g. crocus, locus, circus, bonus, virus (Nouns are the names of things.)
- -ous is an adjective ending telling us how something is e. g. famous, nervous, generous, dangerous
- Keep this one in reserve in case she needs it later:
- If the word has a 'sh' sound before the 'us' then we use –ious e. g. vicious, malicious, fictitious, anxious

8. *coud* - the spelling rationale for this one is lost in the mists of time. A writing strategy is recommended e.g. 'could' and 'would' and 'should'.

The next two are best dealt with by getting them nearer to the correct version than perfect as yet, identify the baseword and articulate it clearly.

9. *erelivent* – start with correct articulation 'relevant' and syllabify i-rele-vant. Later point out the double 'rr' after the short vowel sound.
10. *iameditly* - im – mediate – ly, prefix 'im', we must double 'mm' after the short vowel sound

- esentials – the base word is 'essence'.

© 2018 Global Journals

After the short vowel sound we must use 'ss' to keep the short vowel pattern. Felix may be saying "E – sential" which is incorrect for spelling.

- etraordinary - extra, ex - tra - ordinary
- enered enter, en - ter-ed
- banesed banish ed

The main point with this last set of four is to ensure that he is articulating the base words correctly for spelling. He needs to use citation mode for spelling and proof reading as well as clear articulation in running speech and may need some attention to this.

The Teacher's Orthographic Toolkit

- The Spelling Detective's Dictionary www.ldrp.org,uk
- The CPSS prompt list (on a green card)
- The 15 Spells on reverse side of the green card for the particular subject
- A 'good' standard dictionary – has 5 pieces of information about words
- A list of 10 to 20 subject specific words to practice CPSS
- A school policy for spelling incorporating references to CPSS and the 15 Spell

V. Conclusions

The Cognitive Process Strategies for Spelling have been shown to be an effective method for intervening on Orthographic phase dyslexic spelling errors. They have worked with undergraduates and now are shown to help dyslexic spellers improve their skills. As the case numbers have increased it was found that at least two years progress in each year can be achieved with regular mini lessons. Some bright pupils have made 2 years progress in 6 months.

The most important feature is that poor spellers including dyslexics can overcome their 'learned helplessness' and actually enjoy problem-solving work on their misspellings. The strategies can also be imported into ordinary classroom work on spelling development and have also been shown to be beneficial. Capturing further evidence for this now needs a funded research project. The problem has been that once teachers see that CPSS works they just go off and do it incorporating it into their general repertoire because it seems such a obvious way to work. Parrant's research, as early as 1989 showed how effective this could be in the general classroom in a junior school for reducing spelling errors.

However many teachers are anxious about trying to teach spelling because their knowledge of how best to do it is limited and no-one has shown them how it might be possible. This is especially important in initial training so that every teacher becomes responsible for spelling development in their subject area as they introduce new vocabulary. Many English teachers will be doing this but they need the support of colleagues and a school policy on spelling and handwriting would help them.

Although schools have been encouraged to record the specialist vocabularies for their subject areas and teach pupils the spellings, the teachers have had limited spelling development knowledge and resort to encouraging rote learning and testing. Thus CPSS and the 15 spells are projects waiting for adoption.

Just as special needs, now termed 'additional needs' is considered to be every teacher's concern, so spelling and handwriting needs in the subject areas have to become the remit of every teacher to contribute to their development. This is crucial in the primary or elementary school years to gain the improvements needed and then again in the secondary school to support those with residual difficulties as they acquire new and more technical vocabularies.

References Références Referencias

1. Cowdery, L.L. 1994 *The Spelling Notebook Reprint* Wrexham: TRTS Publishing.
2. Hanna, P.R. and Hanna, J.S., Hodges, R.E. and Rodori, E.H. 1966 *Phoneme-Grapheme Correspondence as Cues to Spelling Improvement* Washington DC: US Office of Education
3. Henry, M.K. 1997 'The decoding/spelling curriculum. Integrated decoding and spelling instruction from pre-school to early secondary school' *Dyslexia* 3 178-89
4. Iqbal, S. and Pipon-Young, L 2009 'The Delphi method' *The Psychologist* 22 (7) 598-600.
5. Kuczaj, S.A. 1979 'Evidence for a language learning strategy in the relative ease of acquisition of prefixes and suffixes' *Child Development* 50 1-13
6. Montgomery, D. 1983*Study Skills and Learning Strategies* Kingston: LDRP
7. Montgomery, D. 1997 a *Spelling: Remedial Strategies* London: Cassell.
8. Montgomery, D. 2008 'Cohort analysis of writing in Year 7 after 2, 4, and 7 years of the National Literacy Strategy' *Support for Learning* 23, (1) 3-11
9. Montgomery, D. 2016 *Casework Report for PPUK* Maldon: LDRP
10. Montgomery, D. 2017 *Dyslexia-friendly Approaches to Reading, Spelling and Handwriting. A toolkit for teachers* London: Routledge
11. Parrant. H. 1989 'An investigation of remedial approaches to children's spelling difficulties' Unpublished SEN dissertation Kingston upon Thames: Kingston Polytechnic
12. Sumsion, T. 1998 'The Delphi technique' *British Journal of Occupational Therapy* 71 (4) 153-56.

© 2018 Global Journals