SPECIFIC LEARNING DIFFICULTIES
UNIT 12
LEARNING TO WRITE

Learning objectives

Trainees will:

- Understand the not-so-simple view of writing
- Know how spelling is learned
- Understand the contribution of handwriting
- Understand the impact of working memory on writing

ONLINE RESOURCES

The content and tasks throughout these PDFs are supported by online resources that are designed to facilitate and supplement your training experience.

Links to these are signposted where appropriate. The resources use graphics and interactive elements to:

- Highlight salient points
- Provide at-a-glance content summaries
- Introduce further points of interest
- Offer visual context
- Break down and clearly present the different stages and elements of processes, tasks, practices, and theories

The online resources offer great benefits, both for concurrent use alongside the PDFs, or as post-reading revision and planning aids.

Please note that the resources cannot be used in isolation without referencing the PDFs. Their purpose is to complement and support your training process, rather than lead it.

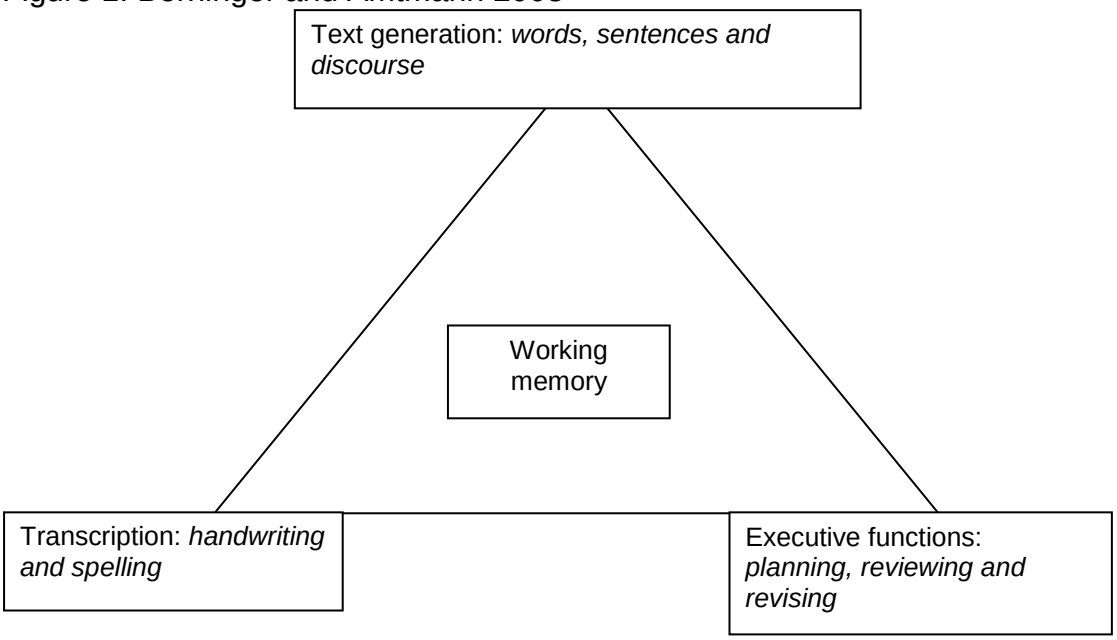
You should complete any learning or teaching tasks and additional reading detailed in this PDF to make full use of the Advanced training materials for autism; dyslexia; speech, language and communication; emotional, social and behavioural difficulties; moderate learning difficulties.

To find out more about the resources, how they work, and how they can enhance your training, visit the homepage at: www.education.gov.uk/lamb

The first resource for this unit can be found here:
www.education.gov.uk/lamb/spld/learning-to-write/intro

The not-so-simple view of writing
Writing is a complex process which involves the orchestration of many different skills. The not-so-simple view of writing summarises this.

Figure 1: Berninger and Amtmann 2003



In essence writing is a process dependent upon working memory that involves the transcriptional elements of spelling and handwriting, the executive functions of planning, reviewing and revising, and the text generation elements of knowledge and understanding of words, sentences and discourse. To be a good writer all these elements need to be coordinated in working memory. Those who find writing difficult may have difficulty with an individual element or a combination of elements. Writing is therefore a greater challenge for the pupil and for the teacher, since there are so many different skills that come into play. This means that no single approach to intervention will work with all pupils, and appropriate intervention will depend upon careful identification of the needs of each individual experiencing difficulty. See unit 4 for an exploration of how this assessment might be carried out.

Text generation skills involve vocabulary, grammar and semantics, plus an understanding of the needs of the reader. These skills are underpinned by oral language skills. Therefore pupils who experience specific difficulties with language are likely to struggle with text generation.

Unlike difficulties with learning to read, writing difficulties may be more difficult to indentify and are usually evident later in the pupil's school life. Essentially until the curriculum requires extended writing as a means of expressing learning the difficulties may not be evident. One early indication is a measure of the amount of writing produced under timed conditions, poor writers write less, and this correlates well with outcomes in later primary school years.

Learning to spell

Activity 1: Make a note in your learning log of your answer to the following questions.

- What do successful spellers do?
- What do you have to know to be a successful speller in English?
- Which words are the easiest or hardest to spell?

Now read through this section and compare your answers.

Being a good or experienced reader does not mean spelling will be easy. There are pupils who can read 'said', but who spell it 'sed'. Although pupils need phonic knowledge and the ability to use it, plus knowledge of irregular words, spelling and reading seem to make different demands. To some extent different processes go on in reading and spelling, at least in inexperienced readers and spellers. Indeed some pupils with difficulties in literacy experience them almost wholly as spelling difficulties. Spelling is known to be harder than reading since in spelling only complete information about the letters in a word will do; in reading it is possible to use other cues to support poor decoding skills.

The basis for learning spelling in English has to be a thorough knowledge of letter sound correspondences, or phonics. The process pupils have to engage in when using phonics to read is blending, the process for spelling is segmenting. This process involves hearing the word, either aloud or 'in your head', and chopping it up mentally into phonemes. Next the speller will match each phoneme to a grapheme or letter. Sometimes the phoneme may be represented by more than one letter as in the case of /ch/ and so on. Often there will be a choice of more than one letter or group of letters. Consider how to spell the sound /ay/ as in day. This sound is commonly spelled as a_e (ate), ai (rain), and a (baby). A novice speller will have to use the only option they are familiar with; a more experienced speller may be bewildered by the choice!

See online resource:
www.education.gov.uk/lamb/spld/learning-to-write/segmenting

English spelling has a compromise to make between accurately representing phonemes in a word, and the number of letters available. Since there are around 40 or more phonemes commonly used in spoken English (depending on your accent), and only 26 letters in our alphabet, some adjustments have to be made. The greatest adjustment is in how vowel sounds are represented. There are about 21 vowel sounds to represent, and yet there are only 5 letters that we think of as vowels. This issue is dealt with by combining vowel letters with other vowel letters and even consonants, for instance 'ee', 'oo', 'ow', 'igh', and 'or'. Inevitably spellings involving these vowel digraphs are harder than spellings involving simpler representations of vowels.

See online resource:
www.education.gov.uk/lamb/spld/learning-to-write/phonemes-table

Words that contain common patterns of letters are easier to learn, for instance hill, will, kill, mill, fill. It is thought that pupils may be learning through analogy for groups of words like this. For words such as ‘soap’ that have no other words spelt in a similar way, but plenty of other words which sound similar but are spelt differently such as ‘hope’ and ‘rope’, remembering the spelling correctly will be more difficult. In this example to spelling of ‘hope’ and ‘rope’ will interfere with the memory for ‘soap’, and may result in the incorrect spelling of ‘sope’.

Phonic approaches will only work for regular words, so some other approaches, such as learning spelling rules, are also necessary. However, spelling rules are problematic in English, and might best be thought of as guidelines, since most rules have exceptions. Indeed the history of spelling in English is complex and at times more than a little ridiculous. A website is listed at the end of the unit if you wish to learn more. A good speller would be able to orchestrate phonic skills, morphological knowledge, words learned by rote, spelling patterns and spelling guidelines.

See online resource:
www.education.gov.uk/lamb/spld/learning-to-write/spelling-skills

English is a morpho-phonological code; written English is not purely phonetic, it also takes account of morphology. A morpheme is the smallest unit of a word that means something.

Happy = one morpheme
Happiest = 2 morphemes
Unhappiest = 3 morphemes

Many words in English are spelled the way they are for morphological reasons; reasons related to their meaning. A good example is magic. When we spell magician, although phonetically it could be spelt ‘maji-shun’ the root word ‘magic’ is retained to give a sense of the meaning of the word. The morphological affix ‘ian’ is used to denote any word relating to a person. So we also use it for librarian, libertarian and so on. Once you know this you are unlikely to ever get the affixes ‘ion’ and ‘ian’ confused.

See online resource:
www.education.gov.uk/lamb/spld/learning-to-write/morphological-spellings

Written English also uses different spellings to separate homophones; consider reign, rain, rein, all spelt the same and yet the spelling makes it clear exactly which meaning is intended.

Spelling development
Spelling development is thought to occur through the gradual improvement of a range of strategies for spelling. Rittle-Johnson and Seigler (1999) suggest

that even from the earliest stages of writing spellers are using a variety of strategies, such as visual checking, encoding phonically, using analogy and memory of whole words or a mix of strategies such as part retrieval and part sounding out. Spelling guidelines and visual checking are used in combination with other strategies since neither will give the correct spelling on its own. These skills gradually improve through experience and teaching until the pupil reaches competence. Early on in development pupils are more likely to rely on processes like phonic encoding (sounding out) and as they develop their skills in other areas they rely on this less. A skilled speller will be able to retrieve whole words correctly from memory and only use other strategies as a backup. Phonic encoding is the primary backup strategy used by all beginner spellers. Poor spellers are those who struggle to use this backup strategy effectively and tend not to represent all the sounds in a word.

Handwriting

Handwriting has two important features:

- Speed, and
- Legibility

Often in schools only legibility is taught, however it is equally important to be able to write fluently as this has a significant impact on crucial things such as exam performance (if you can get more written down, you can get more marks). Boys do tend to develop handwriting skills a little later than girls and are often slower writers. Interestingly there is also a strong link between handwriting and spelling. Spelling ability significantly predicts handwriting speed as difficulties in spelling slow down handwriting and typing. Conversely, the effort involved in handwriting for some, interferes with the ability to spell more difficult words, typing removes this difficulty, but only if proper touch-typing skills are taught.

Pupils will often present with pencil/pen grips which are not the classic tripod grip. This is not necessarily a cause for concern since many modified grips work well and do not affect legibility or speed. It is thought up to 75% of people use a modified tripod grip of some sort. If you catch pupils early on with inefficient grips (grips that are hindering fluent writing) it is usually possible to retrain them, however once someone has been writing for many years with a particular grip it becomes so well learned it can be almost impossible to change. In this case time may be better spent on teaching touch-typing.

Text generation

Text generation is thought to depend upon broader oral language processes, particularly difficulties with the non-phonological dimensions of language (Connelly, Dockrell and Barnett, 2010). Vocabulary diversity is one such non-phonological dimension and is a building block for text generation. Text generation will also suffer if the skills relating to handwriting and spelling are insufficiently developed, since the pupil will experience ‘cognitive overload’; they have to expend so much of their learning resource on writing the words and/or working out the spellings that they have little left over to consider composition. The not-so-simple view of writing (Berninger & Amtmann, 2003)

states that automatic production of letters is necessary, but not sufficient, for good writing to occur.

Working memory and learning to write
All the processes involved in writing depend on working memory. The active maintenance of multiple ideas, the retrieval of grammatical rules from long-term memory, and the self monitoring required in the act of writing depend upon working memory. Poor writers typically have poorer working memory than good writers.
Working memory is used to:

- Plan a sentence and remember it long enough to write it
- Sound out a word to and remember it long enough to spell it
- Remember and use the correct motor process to produce a letter or word as needed, as you are remembering the spelling
- Plan a story line and compose the story
- Organise key points in a text so they are presented logically
- Remember your 'place' in a composition
- Copy a word from a dictionary or word bank correctly

Pupils have to gradually automate low level processes (handwriting and spelling) so that resource can then be freed up for more demanding processes such as composition and planning. For pupils who struggle with transcriptional aspects of writing, improving automaticity for spelling and handwriting improves text composition. Working memory is the key skill which underpins all the skills involved in writing.

See online resource:
www.education.gov.uk/lamb/spld/learning-to-write/working-memory

Activity 2
Now plan a short staff meeting to introduce your colleagues to the theories in this section. Discuss the implications for teaching and curriculum design, and remember to ask colleagues to evaluation the session. Include their evaluations and your planning in your learning log.

References

Taylor, J. (2001) Handwriting: a teacher's guide; multisensory approaches to assessing and improving handwriting skills David Fulton

Berninger, V. & Amtmann, D. (2003).
Preventing written expression disabilities through early and continuing assessment and intervention for handwriting and/or spelling problems: Research into practice. In H. Swanson, K. Harris, and S. Graham (Eds.), *Handbook of learning disabilities* (pp. 323- 344). New York: The Guilford Press.

Connelly, V., Dockrell J. E., and Barnett, A. L. (2010) Children challenged by writing due to language and motor difficulties. In press.

Rittle-Johnson, B. R. & Siegler, R. S. (1999). Learning to spell: Variability, choice, and change in children's strategy use. *Child Development, 70*, 332-349

Useful websites

For an entertaining summary of the history of British English spelling: http://www.englishspellingproblems.co.uk/html/history.html