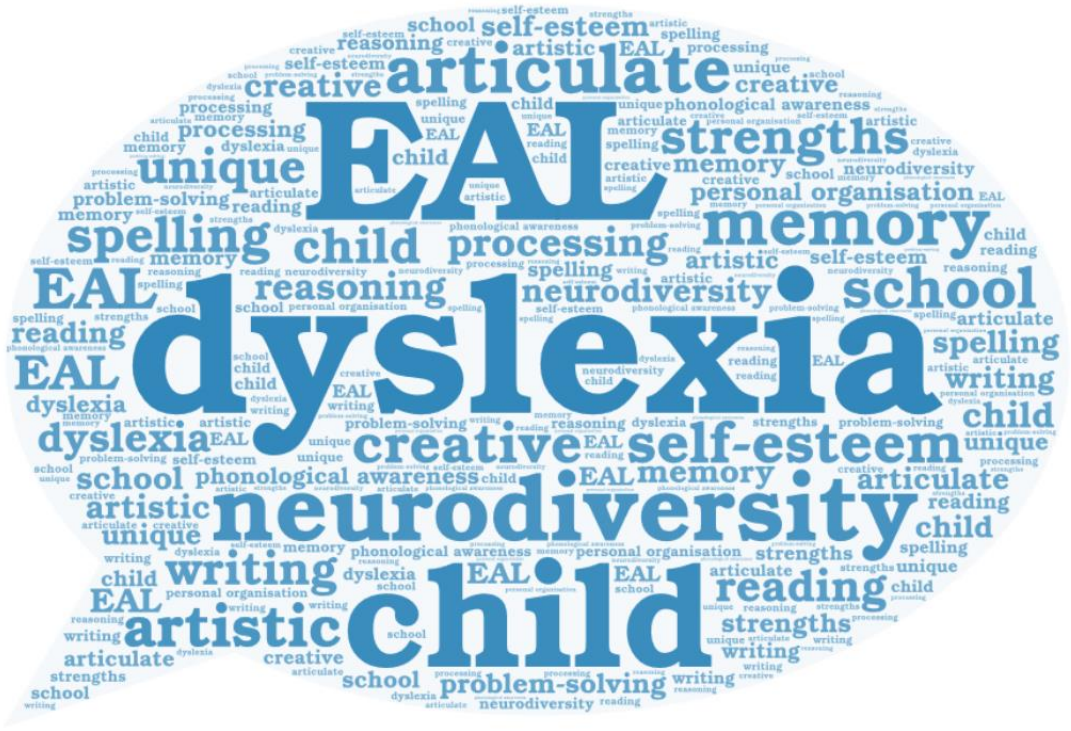
EAL and Neurodiversity

In this blog, Hampshire EMTAS Specialist Teacher Advisors Lisa Kalim and Sarah Coles discuss current thinking in the cross-over territory where EAL and Dyslexia meet.



What is dyslexia?

Dyslexia is a specific learning difference that falls under the umbrella term "neurodiversity". It is thought to affect around 10% of the population, cutting right across the range of abilities.

It is known that different people with dyslexia experience it in different ways. Although in the past dyslexia was often viewed as a barrier to learning, these days it is accepted that there are positives to thinking differently and many dyslexic people are now recognised for their strengths in areas such as reasoning, problem-solving, oral skills and in visual and creative fields.

According to the British Dyslexia Organisation, "as each person is unique, so is everyone's experience of dyslexia", thus every child with dyslexia will have a different blend of strengths and weaknesses. In school the focus on an academic curriculum can cause some children difficulties in certain areas such as:

- memory
- organisation
- processing
- phonological awareness
- reading, writing and spelling

– self esteem.

Some people may experience only mild impacts whilst others may experience much more significant difficulties across multiple areas – which may be more noticeable in a classroom setting.

Does dyslexia exist in other languages?

Yes, it does. Research suggests that its impact in terms of difficulties children with dyslexia may face may be more pronounced in some languages than others. This is to do with **transparency** (NALDIC, 2020). Some languages are more **transparent** than others ie the relationship between phonemes (units of sound) and graphemes (written symbols that represent phonemes) is more straightforward in some languages than in others.

- More **transparent** languages include **Italian**, **Spanish**, **Kannada** and **German**. The relationship between sound and symbol is consistent.
- More **opaque** languages include **Tamil**, **English** and **French**. In these languages, it is more difficult to predict spellings and pronunciation because the relationship between sound and symbol is not consistent.

Figure 1: Continuum showing the approximate degree of transparency of various languages (NALDIC, 2020)

As a concept, languages and their relative transparency is complex. Different languages use different scripts and different orientations, some are not alphabet-based and some have no written form. The table below gives more information about various alphabet-based languages, their relative transparency and additional reasons why they may present challenges for the child with dyslexia.

Language	Features
Dutch	More transparent.
English	Opaque. Inconsistent mapping of sound to symbol – 26 letters but 44 sounds. When combined with a weak phonological awareness and slow processing skills, presents particular difficulties for people with dyslexia.
French	More opaque. Silent letters and relatively large number of homophones. Accents and cedillas.
German	More transparent. Large clusters of consonants and compound nouns can be difficult to process, hence processing & reading speed likely to be slower for someone with dyslexia.
Greek	More transparent. Morphophonemic script like English but more transparent.
Hebrew	More transparent. Uses a different alphabet from English. Dots and dashes under words are used as pronunciation aids to indicate vowel sounds.
Hungarian	More transparent. Accents and long words due to being an agglutinative language.
Italian	More transparent.
Polish	More transparent but has other difficulties.
Russian	More transparent but complex system.
Spanish	More transparent but people with dyslexia may have a slower reading speed.

Figure 2: Approximate relative transparency of different languages & features which may present difficulties for learners with dyslexia (NALDIC, 2020)

What about languages that are not alphabet-based?

Some languages don't use an alphabet eg Mandarin, Cantonese, Japanese and Korean. In Mandarin:

- the basic speech unit is the syllable
- the basic orthographic unit is a character
- the rules in the sound-script correspondence in Mandarin are very different from those present in English

Mandarin	English
Graphic units (characters) represent basic units of meaning (morphemes)	Graphic units represent phonemes. Units of meaning – words - are built from combinations of phonemes

In addition to the above differences, Mandarin is a **tonal** language; a change in tone changes the meaning. These differences apply not only to Mandarin but also to other languages that work in a similar way eg Japanese and Korean. A dyslexic Mandarin speaker, for example, may not experience any difficulties when learning to read and write in Mandarin but may find learning to read and write in English much more challenging.

How come English is more opaque than other languages and what does this mean for someone with dyslexia?

English is often cited as one of the most difficult languages for children with dyslexia to learn. Here are some reasons why:

- Weak correspondence between phonemes and graphemes eg compare how '-ough' is pronounced in cough, bough, tough, through and dough
- Mapping between sound and symbol is more inconsistent in English than in most other European languages
- In combination with weak phonological awareness and slow processing, these inconsistencies present particular difficulties for someone with dyslexia.

Here are some difficulties that someone with dyslexia may experience:

- Reading speed can be impacted for children with dyslexia
- Processing time may be longer – learners need to scroll through various possibilities in order to retrieve the correct phonologically assembled label. Eg similar labels ('god', 'dock', 'bog') need to be rejected before 'dog', the correct label is chosen.

It can also be the case that a child's dyslexia is mild in their more transparent first language but more pronounced in English with the latter presenting phoneme-grapheme correspondence problems they didn't encounter in their first language. For instance, a Spanish-speaking child may experience only minor difficulties reading and writing in their first language as Spanish is very transparent whereas in English, a very opaque language, they may struggle more.

What does all this mean when it comes to MFL?

It is thought that more transparent languages may be easier for a dyslexic person to learn, so in school, the outcomes for a person with dyslexia may be better if they were to take Spanish or Italian than if they took French.

So how can we support children learning English as an Additional Language who also have dyslexia?

The support strategies recommended for monolingual children with dyslexia are equally relevant to children learning EAL and may include:

- Approaches that help with self-esteem
- School staff should consider sharing information about dyslexia with the individual child and with their parents/carers (ie that it's a specific difficulty that affects particular areas and does not mean that the child is 'stupid' or cannot learn)
- Collaborative approaches – peer support

- Grouping – children with dyslexia should not be in the bottom group but with children of similar cognitive ability
- Over-learning/repetition
- Multi-sensory approaches
- Extra time for processing eg slowing down the rate at which instructions are given and allowing more time for pupils to respond to questions
- Limiting the amount of written work required and using alternative ways of recording information/responses to tasks set
- Use of diagrams and visuals to assist with memorisation
- Use of technology
    - Auto-correct in word processing software, spell checkers, predictive text
    - Speech-to-text software
- Exam concessions eg use of an amenuensis or reader

Some people think that the use of coloured overlays or different coloured paper or background colours on screen are helpful but empirical evidence for this is limited and the jury's still out on these points.

An individualised approach will be needed for each child with dyslexia. Children with dyslexia who are learning English as an Additional Language will still need EAL support appropriate to the stage they have reached in their acquisition of English. See the Bell Foundation EAL Assessment Framework for an example of an EAL-specific framework that maps progression and allows practitioners to track progress.

For further advice on individual bilingual children in your school who you're concerned about, see the EMTAS website for a step-by-step process to follow and a downloadable, editable form for recording relevant information.

Tags: neurodiversity dyslexia EAL SEND