1. LuzRello, PhD:

* In 5.6, Discussion; it is stated that dyslexia accessible tools and practices are partically language dependent.
* In page 117, “Foreign Errors”, it is stated that non-native speakers of English and Spanish make spelling errors. For example: Spanish learners of English language make errors like “receibe” instead of “receive”.
* In page 233, it is explained that Dyslexia manifestations vary depending on different language orthographies [57]. As explained in section 2.1.3, English and Spanish orthographies are different.

1. Language Disorders in Multilingual and Multicultural Populations

* The reading problems of multilingual children with dyslexia may therefore be language specific, and the severity of the problem will be influenced by the characteristics of each orthographic system. In contrast, reading difficulties can stem from underlying problems, such as reduced vocabulary, listening comprehension, and working memory, associated, for example, with primary language impairment (PLI)[4](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4527602/#FN4) or with a separate disorder, hyperlexia (precocious decoding skills markedly superior to reading comprehension

1. Multilingual dyslexia in university students: Reading and writing patterns in thee languages:

* First of all, I would like to point out the limitations stated by the researchers of the article: The limitations of the present study include the sample size and the practically unavoidable individual variation in language proficiency. Both induce variability in the data, but the effect sizes for the statistically significant group differences were nevertheless in the medium-to-high range. Obviously, the present results concern a particular constellation of languages. Other language constellations such as English and French could help, for example, in disentangling the concepts of ‘orthographic depth’ and ‘irregularity/transparency’ that are here confounded (for a discussion with examples from English.
* Our findings reveal performance features in the dyslexia group that can be related to inaccurate phonological representations and weak orthographic skill (e.g. Moats, [1996](http://www.tandfonline.com/doi/full/10.3109/02699206.2011.562594)Moats, L. C. (1996). Phonological spelling errors in the writing of dyslexic adolescents. Reading and Writing: An Interdisciplinary Journal, 8, 105–119.[[CrossRef]](http://www.tandfonline.com/servlet/linkout?suffix=CIT0025&dbid=16&doi=10.3109%2F02699206.2011.562594&key=10.1007%2FBF00423928), [[Web of Science ®]](http://www.tandfonline.com/servlet/linkout?suffix=CIT0025&dbid=128&doi=10.3109%2F02699206.2011.562594&key=A1996UA95000008); Høien and Lundberg, [2000](http://www.tandfonline.com/doi/full/10.3109/02699206.2011.562594)Høien, T., & Lundberg, I. (2000). Dyslexia: From theory to intervention. Dordrecht: Kluwer.[[CrossRef]](http://www.tandfonline.com/servlet/linkout?suffix=CIT0013&dbid=16&doi=10.3109%2F02699206.2011.562594&key=10.1007%2F978-94-017-1329-0)). They further indicate that as compared to normal performance, multilinguals' dyslexic problems in reading and writing tasks are most clearly observed in a language less well mastered and that is orthographically opaque.

1. Bristish Dyslexic Organization:

* Dyslexia specialists generally agree that dyslexic children should be given an opportunity to learn a foreign language. Some schools only offer French as an option. Unfortunately, French, like English, is a relatively opaque language. This means that it does not have clear letter-sound correspondence and has more irregularities than a language such as Spanish or Italian. Spanish, Italian and German, on the other hand, are much more transparent languages with clear letter-sound correspondence. This facilitates spelling and pronunciation. German has the additional advantage of having a sound system (especially if you are Scottish) that is very close to that of English. German and English also share a large number of words (such as ‘Bank’, ‘Hand’, ‘Park’ and ‘Arm’). However, dyslexic learners may struggle with other aspects of German such as cases, gender of nouns, multiple consonant combinations, long multisyllabic words and unfamiliar word order.
* Although transparent languages have obvious advantages over opaque languages, it should be recognised that, whichever language is chosen, dyslexic learners are likely to experience difficulties in a range of areas including speed of information processing, word retrieval and short term memory.

1. Dyslexia has a language barrier: From TheGuardian (<https://www.theguardian.com/education/2004/sep/23/research.highereducation2>):

* Alan is a bilingual who is fluent in Japanese and also speaks English. What brought Alan to the notice of Taeko Wydell, an expert on Japanese reading, and Brian Butterworth, was that he was severely dyslexic, but only in one language. In the other, he was probably in the top 10% of readers of his age.
* The study, led by Li Hai Tan and reported in Nature, may unexpectedly tell us some key things about how dyslexia affects the brain. Brain functioning, and indeed structure, is moulded by experience. Learning a regular spelling system such as Italian creates differences in brain organisation compared to learning highly irregular English. Italian has 26 rules to learn, which takes about six months; English takes longer because there are many irregularities (and several hundred rules). In Chinese 3,500 characters are needed to read the equivalent of the Daily Mail and about 6,000 characters to read books.
* The second main difference is that in English each linguistically distinct sound, or phoneme, maps to a single letter. For example, the three phonemes in "bat" map on to three letters. If one letter is changed it makes a new word. A Chinese character maps to a whole syllable. In Putonghua, the national language of China, there are about 1,800 distinguishable syllables; each syllable can have several meanings and each meaning is typically represented by a distinct character.
* How will these differences be reflected in brain organisation? Learning Chinese creates specific demands on the areas for remembering visual patterns. English readers make more use of areas for phoneme processing. This ability to analyse syllables into phonemes is the key problem in dyslexia. Dyslexics have difficulty segmenting the word "that" into three separate sounds - so fare much worse in learning English than Chinese. Reported prevalence of dyslexia is much higher in English (about 5-6%) than Chinese. I surveyed 8,000 schoolchildren in the Beijing region, with Yin Wengang of the Chinese Academy of Science, and found that about 1.5% were dyslexic. This kind of evidence suggests that a single underlying deficit of the ability to analyse words into phonemes can cause dyslexia for any reader, but will be more severe where phonemes are involved.
* In Alan, this theory predicts accurately that the affected language will be English, since Japanese does not require analysis into phonemes.
* [Research](https://www.theguardian.com/education/research) by Frith's team shows that small variations in brain organisation are due to orthography, with Italian making more demands on the phonemic system, because it is regular, and English making more demands on the naming system because words cannot be read correctly using phonic rules and have to be named - for example: colonel, yacht, pint. We assume the part of Alan's brain that deals with phonemic analysis is not working efficiently, which causes a problem reading English, compared to Japanese.
* The first surprise in Tan's study was that a key peak in brain activity in Chinese readers fell outside the network typically used by European readers. The second surprise was that dyslexics showed lower activation in several key reading areas compared with normal Chinese readers, but this was in a very different brain area from Frith's European dyslexics.
* Both Frith and I have argued that dyslexia has a universal basis in the brain that affects phonemic analysis. Tan and his colleagues, by contrast, conclude that "the biological abnormality of impaired reading is dependent on culture". If we are right, Alan uses the same brain network for English and Japanese, and the malfunction only affects English reading. If Tan is right, Alan has separate networks for English and Japanese, and only the former is affected.
* A lot will turn on which of us is right. [Dyslexia](https://www.theguardian.com/society/dyslexia) frequently runs in families, and there has been much research trying to identify the genes responsible. If dyslexia is governed by culture, then Chinese dyslexia may be caused by a different genetic anomaly than English dyslexia.