**We need a new definition of dyslexia, research says**

A new definition of dyslexia is needed to more accurately describe the learning disorder and give those struggling with dyslexia the specific support they require, says new research.

Dyslexia has had several different definitions over the years and this murky and complicated history means it can be a postcode lottery for children who may have dyslexia, or those who have been diagnosed but can’t access the support they need.

The first step to fixing this issue, new research has argued, is to redefine dyslexia and adopt the new definition across the UK.

The research was conducted by the University of Birmingham, the SpLD Assessment Standards Committee (SASC), Kings College London, and the University of Oxford. It is published today (25th Feb) in the [*Journal of Child Psychology and Psychiatry*](https://acamh.onlinelibrary.wiley.com/doi/10.1111/jcpp.14123).

Julia Carroll, Professor of Psychology in Education at the University of Birmingham who led the study, said: “There has not been a new attempt to define dyslexia since the Rose Review in 2009. The review provided a definition and argued for specialist teachers to help identify and support dyslexia. Despite the Rose definition significantly influencing practice, it has gathered criticism over the last 15 years and has not been universally accepted.

“In addition to this, there is no clear universal pathway for the assessment of children with dyslexia in England, Wales and Northern Island, and the process for identifying learning needs and interventions can vary massively from place to place. Adopting a universal definition for dyslexia is the first step to improving support for children experiencing the challenges of dyslexia.”

The researchers brought together 58 international experts in dyslexia, including academics, specialist teachers, educational psychologists, and individuals with dyslexia, to vote on whether they agreed with several key statements about dyslexia. The statements covered six key sections: the definition of dyslexia, intellectual abilities and dyslexia, the etiology of dyslexia, co-occurrence with other disorders, the changing impact of dyslexia over a lifespan, and common misconceptions.

42 statements received a consensus of more than 80% and were accepted by the group. They were then used to create the new definition of dyslexia:

* Dyslexia is a set of processing difficulties that affect the acquisition of reading and spelling.
* In dyslexia, some or all aspects of literacy attainment are weak in relation to age, standard teaching and instruction, and level of other attainments.
* Across languages and age groups, difficulties in reading fluency and spelling are a key marker of dyslexia.
* Dyslexic difficulties exist on a continuum and can be experienced to various degrees of severity.
* The nature and developmental trajectory of dyslexia depends on multiple genetic and environmental influences.
* Dyslexia can affect the acquisition of other skills, such as mathematics, reading comprehension or learning another language.
* The most commonly observed cognitive impairment in dyslexia is a difficulty in phonological processing (i.e. in phonological awareness, phonological processing speed or phonological memory). However, phonological difficulties do not fully explain the variability that is observed.
* Working memory, processing speed and orthographic skills can contribute to the impact of dyslexia.
* Dyslexia frequently co-occurs with one or more other developmental difficulties, including developmental language disorder, dyscalculia, ADHD, and developmental coordination disorder.

Professor Carroll continued: “A definition of a learning disorder such as dyslexia, should allow researchers and practitioners to consistently establish what should, or should not be considered ‘dyslexia’, what the boundaries to diagnosis should include and what elements are important in assessment. Our new definition retains the idea of difficulties with reading and spelling relative to age, ability, or educational expectations. However, it is less focused on English speakers and children. In line with evidence, we highlight that phonological processing has a causal link to dyslexia, but that other factors also play an important role in explaining variability in presentation. We also note the high rates of co-occurrence between dyslexia and other developmental difficulties.”

In a second study from the same group, published in the [*Dyslexia Journal*,](https://onlinelibrary.wiley.com/journal/10990909) the researchers examined ways to improve dyslexia assessments which start with the new definition. The process agreed upon by the expert panel fell into four main steps once a child has presented with difficulties in reading, spelling or writing fluency that affect daily functioning:

* Stage 1: Consider, rule out and respond to other factors that might be the primary reason for reading, spelling or writing difficulties.
* Stage 2: Gather further information and, where necessary, intervene with additional support fast and early. Be aware of warning signs and likely indicators that suggest the possibility of persistent difficulties.
* Stage 3: Observe, record and evaluate response to intervention.
* Stage 4: Where response to intervention is stalling or failing, refer for a comprehensive assessment by a specialist teacher assessor or psychologist with appropriate training.

The study argues that, along with the standard definition, there should be a national statutory pathway to dyslexia assessment following this process.

Professor Carroll concluded: “Dyslexia is a complex learning disorder that can look different from person to person. It can have lasting impacts on education and then on working life if not identified and addressed properly. By not having a universal process to identify and support people with dyslexia, we are letting down so many of our children and young people. If the government is serious about improving SEND provision in schools, then updating and standardising the definition and assessment for dyslexia should be a priority.”

**ENDS**

For more information, please contact Ellie Hail, Communications Officer, University of Birmingham at [e.hail@bham.ac.uk](mailto:e.hail@bham.ac.uk) or alternatively on +44 (0)7966 311 409. You can also contact the Press Office out of hours on +44 (0)121 414 2772.

**Notes to editors**

* **Full new definition of dyslexia:**

Dyslexia is a set of processing difficulties that affect the acquisition of reading and spelling.

In dyslexia, some or all aspects of literacy attainment are weak in relation to age, standard teaching and instruction, and level of other attainments.

Across languages and age groups, difficulties in reading fluency and spelling are a key marker of dyslexia.

Dyslexic difficulties exist on a continuum and can be experienced to various degrees of severity.

The nature and developmental trajectory of dyslexia depends on multiple genetic and environmental influences.

Dyslexia can affect the acquisition of other skills, such as mathematics, reading comprehension or learning another language.

The most commonly observed cognitive impairment in dyslexia is a difficulty in phonological processing (i.e. in phonological awareness, phonological processing speed or phonological memory). However, phonological difficulties do not fully explain the variability that is observed.

Working memory, processing speed and orthographic skills can contribute to the impact of dyslexia.

Dyslexia frequently co-occurs with one or more other developmental difficulties, including developmental language disorder, dyscalculia, ADHD, and developmental coordination disorder.

* **Rose Review (2009) definition:**

Dyslexia is a learning difficulty that primarily affects the skills involved in accurate and fluent word reading and spelling.

Characteristic features of dyslexia are difficulties in phonological awareness (hearing and manipulating speech sounds), verbal memory and verbal processing speed.

Dyslexia occurs across the range of intellectual abilities. It is best thought of as a continuum, not a distinct category, and there are no clear cut-off points.

Co-occurring difficulties may be seen in aspects of language, motor coordination, mental calculation, concentration and personal organisation, but these are not, by themselves, markers of dyslexia.

A good indication of the severity and persistence of dyslexic difficulties can be gained by examining how the individual responds or has responded to well-founded intervention.

* The University of Birmingham is ranked amongst the world’s top 100 institutions. Its work brings people from across the world to Birmingham, including researchers, teachers and more than 8,000 international students from over 150 countries.