

**Specific Learning Difficulties (SpLD) Assessment Standards Committee (SASC) Consultation Paper on the identification of and effective intervention for literacy difficulties in children and adults. Implications for the assessment of dyslexia.**

**April 2022**

**FULL PAPER**

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# INTRODUCTION

This consultation paper has been produced and authored by SASC. SASC is indebted to members of a Working Group, established in January 2021, and to respondents in the second phase of this consultation (see [**APPENDIX 4**](#Appendix_4)), who offered their time freely and whose contributions and varied perspectives have informed its content.

This is the **FULL** version of the paper. You are first advised to read the **SHORT SUMMARY PAPER.** [**Both can be downloaded from the SASC website - use this link**](https://www.sasc.org.uk/Downloads.aspx)**.**

SASC is now embarking upon a third stage of consultation, inviting responses to this paper via an **ONLINE SURVEY** [**use this survey link**](https://www.surveymonkey.co.uk/r/7YHZLH9). The deadline for responses is **Friday 6th May 2022.**

## What will this consultation paper be used for?

In the light of the issues discussed and recommendations made following the consultation, from June 2022, SASC will be considering changes to guidance regarding the assessment of dyslexia. It will carry out an impact analysis on the potential effect of any proposed changes and recommendations, and their potential effect on a range of stakeholders. The paper will also be used as a basis for a SASC response to the March 2022 HM Government SEND Review Green Paper, ‘Right Support, Right Place, Right Time.’[[1]](#footnote-1)

In the meantime, SASC invites all interested individuals and organisations to respond to this consultation paper via the online survey. The consultation provides an opportunity to reflect on practice, discuss the issues and ideas covered in this paper and to explore what potential changes to working and assessment practices might be beneficial and why. Consultation responses will be analysed carefully and subsequent amendments may be made to this paper.

SASC welcomes ongoing dialogue and will endeavour to respond to all queries and comments regarding the purpose of the paper. Email: sasc@sasc.org.uk

## Paper Summary: Key Messages

* *All* children and adults struggling with literacy acquisitionrequire appropriate, targeted and state-funded assessment, intervention, monitoring, and resources.
* Some Individuals present with a developmental trajectory of highly *persistent* difficulty with literacy (reading, spelling and writing). Such individuals require intensive, ongoing and specialised interventions, especially in childhood and when the difficulties co-occur with other neurodevelopmental issues.
* A label such as **dyslexia** enables a common language for understanding, intervention and support for persistent literacy difficulties but, when used in practice, should be linked clearly to underlying assumptions and scientific evidence. It is an ongoing task to better define dyslexia and lay out criteria for its identification. A complex and as yet not fully understood interplay of genetic, biological, cognitive and environmental factors is implicated in dyslexia. It is not necessarily an *unchanging* condition and often co-occurs with other developmental conditions. The recognition that the causes of dyslexia are multifactorial and overlap with difficulties in more general literacy acquisition presents challenges and invites critical enquiry.
* Underlying factors that can play a longer-term role in highly persistent literacy difficulties, such as weaknesses in phonological awareness, may also be implicated in more general or temporary literacy difficulties, as well as in other conditions such as developmental language disorder. Good assessment and intervention practice therefore embodies a hypothesis-testing approach: at what risk is an individual of a *longer-term* developmental difficulty? What factors suggest this longer term trajectory rather than a temporary delay in literacy acquisition, or difficulties attributable to alternative explanations?
* Specific interventions are required to support resilience and management of difficulties in individuals with persistent problems. The role of assessment practitioners as gatekeepers in access to resources would work better if there were nationally agreed, state-funded, coherent and transparent pathways to increasingly specialised and intensive assessments and interventions for individuals who experience persistent literacy (and other) developmental difficulties. The naming and labelling of persistent trajectories of neurodevelopmental difficulty such as dyslexia should be considered as part of the ongoing identification and support of learning needs, **not** act as a condition for the allocation of resources.
* Ideally, teams of professionals, sharing expertise, would collaborate on assessment and interventions for individuals with dyslexia, and in instances where there seem to be a range of co-occurring difficulties (developmental, psycho-social, or medical) which are contributing to a complex picture of need. Specialist teachers, who work closely with children and adults with dyslexia, are skilled in developing pedagogical tools and strategies for supporting individuals with persistent literacy difficulties and other neurodevelopmental difficulties. They can collaborate with their psychologist colleagues and help train classroom teachers and teaching assistants.
* Scientific exploration of the validity of the term dyslexia (and alternative labels) for developmental literacy and associated difficulties will continue. Further opportunities for academics, assessment practitioners, policy makers and resource managers to share knowledge, expertise and experience would be very welcome.

## A Note on Language

In this paper, to reflect the initial aims of this work and to avoid the confusion that might be caused by the use of multiple alternatives, the term **dyslexia** is the primary term used throughout the document. However, in [**SECTION B**](#_SECTION_B:_THE), there is also a discussion of other labels, such as ***specific (or developmental) literacy difficulty,*** favoured by some, and which, arguably, could cater better for those with reading comprehension impairments.

The term ***specific learning disorder/difficulty/difference*** is also already in widespread diagnostic use and is often used as a ‘catch-all category’ for profiles that do not seem to ‘fit’ or meet the criteria for particular named trajectories such as dyslexia. However, it is not always clear exactly *what* is specific about the label SpLD when used in this way.

This paper uses ‘**person-first’ language**, i.e., a ‘person with dyslexia' rather than a ‘dyslexic person’. However, we acknowledge that there are different preferences about the use of this terminology. For some, dyslexia is a core part of their identity and they see themselves as dyslexic, rather than ‘someone with dyslexia'. Other individuals prefer the term ‘with dyslexia'. Following the identification of dyslexia, it is important to clarify what language the individual would prefer, or if this is not possible, to seek guidance from parents, families or carers.

**How to navigate this document – key sections.**

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| There are four main sections. Each ends with a summary. Key policy recommendations are made at the end of [SECTION D](#_SECTION_D:_).Throughout the four key sections of this paper, the reader is signposted to critical questions **highlighted in green.** These are intended as reflection points and the paper does not always provide, in the text, a definitive answer to these questions. However, where possible or appropriate, it does present pertinent evidence, suggestions for assessment practice, and relevant recommendations.[**SECTION A**](#_SECTION_A:_RATIONALE.) introduces the **RATIONALE** for this paper.[**SECTION B**](#_SECTION_B:_THE) provides a brief summary of recent thinking and **research** regarding conceptualisations of dyslexia and criteria for its identification. The scientific underpinnings of a dynamic, dimensional model for understanding developmental difficulties, including dyslexia, is described. **A model for the assessment of dyslexia** is proposed, including a **definition and suggested criteria for identification**. There is a full discussion of key issues in the **use of labels**, such as dyslexia, in the assessment of reading, spelling and writing.[**SECTION C**](#_SECTION_C:_) discusses pragmatic **IMPLICATIONS FOR ASSESSMENT PRACTICE**, of the model proposed in **SECTION B.**[**SECTION D**](#_SECTION_D:_)**, CONTEXT AND POLICY**, looks at the broad **landscape of literacy difficulties** in the UK. It summarises the key political, structural and economic factors that influence access to assessment, intervention and support for literacy difficulties experienced by children and adults. This includes those identified with dyslexia/specific learning difficulties. This section ends with **10 key** **recommendations** for ways in which progressive specialised assessments and interventions should be adopted to support individuals struggling with literacy acquisition, including those with more persistent and complex needs. [**APPENDIX 1**](#_APPENDIX_1._REFERENCES)gives **REFERENCES** and a **BIBLIOGRAPHY**. [**APPENDIX 2**](#Appendix_2) offers a brief summary of **POLICY AND PRACTICE DIFFERENCES ACROSS THE THREE DEVOLVED ADMINISTRATIONS** of the UK, Scotland, Wales and Northern Ireland. [**APPENDIX 3**](#Appendix_3) provides a short summary of **QUALIFICATION PATHWAYS** for the assessment of dyslexia and associated specific learning difficulties in the UK.[**APPENDIX 4**](#Appendix_4) lists **MEMBERS OF THE SASC WORKING GROUP**, and **SECONDARY PHASE CONSULTANTS** and will, in due course, give details of the number of people who participated in the third, survey based consultation phase. |

# **SECTION A: RATIONALE**.

## A-1 What is SASC?

The role of SASC is to support, advance and encourage improvements in standards and best practice in the training and continuing professional development of assessors, and in the assessment of specific learning difficulties such as dyslexia. SASC has been, in recent years, involved with academics and practitioners to produce updated guidance for the assessment of, and/or routes to, the identification of a range of specific difficulties and developmental conditions.[[2]](#footnote-2)

## A-2 The role of the SASC Dyslexia Working Group.

The SASC Dyslexia Working Group was brought together to represent a broad spectrum of research and practitioner experience and, importantly, to face ‘head-on,’ differing views about the identification of dyslexia. The aim was to facilitate discussion and interaction between academics and assessment practitioners, including those who have personal and/or family experience of dyslexia. SASC did not have the resources to explore these issues through methodologies such as the Delphi consensus model. Nevertheless, this paper is the result of successive layers of consultation.

The Working Group considered a wide range of recent research studies and other commentary. These references and resources are listed in [**APPENDIX 1**](#_APPENDIX_1._REFERENCES)**.** Representations from psychologists and specialist teacher-assessors were heard, describing differing modes and models of assessment and intervention for struggling readers, including those identified as dyslexic. SASC also ran a parallel online consultation with a group of assessment practitioners, special educational needs and disability services managers in schools and higher education. This focused on issues around effective assessment for intervention and support in schools, colleges and universities.

Participants with quite differing views and perspectives agreed to take part in this endeavour. This SASC paper has benefited hugely from direct engagement in a process for reaching agreement and common ground. In this paper we have tried to present questions and conundrums, both theoretical and practical, honestly and openly.

Nevertheless, achieving 100% consensus on the issues discussed was never likely to be feasible. Not all members of the Working Group or participants in the subsequent consultation phases subscribe to all the views in this paper and some have reservations about certain conclusions and recommendations.

This paper, authored by SASC, tries to strike a balance between a range of perspectives held by academics and practitioners in this field but it does not represent the views of all members of the Working Group, nor of every participant in the second consultation phase.

## A-3 Questions, challenges and problems.

 **Key questions** were:

* What is dyslexia? How should dyslexia be described and defined? Do we need an updated and agreed definition?
* What criteria should be used to identify dyslexia?
* Is dyslexia a developmental problem that represents a ‘difficulty for life’ or is it a set of learning difficulties that can be largely managed or completely overcome with appropriate intervention and support?
* Would the label dyslexia be better replaced with, for example, *specific (or developmental) literacy difficulty* or an even broader categorisation, such as *neurodevelopmental condition*?
* What are the implications of these issues for current assessment practice?

The concept of dyslexia has a long and well documented history (Snowling, Hulme and Nation 2020). An important element of this social history has been the existence of a number of challenges and problems. As Kirby (2020) says, ‘discussion of dyslexia incorporates the social, the cultural and the political, as well as the scientific.’ [Figure 1](#Figure_1) summarises these issues and questions.

Figure 1. Identifying Dyslexia: Challenges and Problems

The initial discussions of the Working Group centred on issues around definitions and diagnostic criteria for identifying dyslexia. These deliberations are explored further in [**SECTION B**](#_SECTION_B:_THE)**.** [**SECTION C**](#_SECTION_C:_)discusses the pragmatic implications for assessors.

The **wider challenges** were:

* To understand the public and professional debate around dyslexia.
* To review the implications of the most recent research for the understanding of dyslexia.
* To examine assessment for dyslexia within the context of the resourcing of support for Special Educational Needs and Disabilities (SEND) in schools and colleges.[[3]](#footnote-3)
* To consider when and by whom the identification of dyslexia is best made.
* To look at which methods for teaching literacy best support the needs of individuals identified as having dyslexia.

One important outcome of these questions and challenges was that the group quickly moved towards contextualising their work within a somewhat broader and more ambitious remit; to examine the current systems of support for *all* struggling readers, and to identify tiered, dynamic processes for assessment and early intervention, *including* the identification of dyslexia, responsive to individual need.

At present, in the UK, there is little coherence within and between education sectors and levels, and between the devolved administrations, regarding approaches to dyslexia. Some English local authorities and county councils[[4]](#footnote-4) have produced statements to the effect that they do not recognise dyslexia or the need for specialist assessment; others are promoting ‘dyslexia-friendly’ schools and policies. In Scotland, a very different approach is taken and many of the policy issues and difficulties raised in this paper have already been legislated for and addressed. There is an agreed governmental definition of dyslexia and a clear pathway to assessment.

This confusing national landscape makes policy, practice and political issues in this field inseparable. These issues are discussed in detail in [**SECTION D**](#_SECTION_D:_)and[10 key recommendations](#_10_Key_Recommendations) are proposed.

## A-4 Why the need for this paper?

### 1. Variation in diagnostic assessment practice

The identification of dyslexia in the UK is made, currently, by a wide range of professionals, including educational, occupational or clinical psychologists, and specialist teacher-assessors, who work with children and adults experiencing literacy difficulties. In Scotland, a General Teaching Council for Scotland (GTCS) registered teacher working in or supporting the school in Scotland which the student attended and who has completed the [Dyslexia Scotland and Open University 'Dyslexia: Identification and Support' (Module 3) may also carry out diagnostic assessments.](http://addressingdyslexia.org/free-online-learning-modules)

Practitioners may apply different rationale, evidence and assessment measures to derive a diagnosis, and different labels (specific learning difficulty or disorder, dyslexia, specific literacy difficulties) can be used. These issues have implications both for individuals assessed, and for all those tasked with devising and implementing appropriate interventions and support. Similarly, in academia, differing conceptualisations of dyslexia affect sampling and modelling criteria and, therefore, research outcomes and conclusions.

Although, as a result, establishing exact statistical prevalence is problematic, dyslexia very likely remains the *most commonly identified* specific learning difficulty in the UK[[5]](#footnote-5). As such, it also remains subject to public and professional debate regarding its validity as a diagnostic category.

There are questions about the inclusion, under the dyslexia label, of:

* Adults with no clear or obvious record of childhood literacy difficulties who score reasonably well in literacy tests but nevertheless experience some reading or other literacy difficulties (e.g. in spelling, or in writing), often relative to their measured verbal and non-verbal ability.
* Children and adults who score reasonably well in some or most literacy attainment tests but less well in tests of, for example, working memory or processing speed.
* Children and adults with reasonable or good literacy skills but with reported organisational difficulties, e.g. in managing time, study commitments, structuring essays etc.
* Children and adults with low or very low ability and attainment scores across all or most domains, including literacy.

These questions reflect long-standing uncertainties and anxieties felt by assessors in formulating diagnostic conclusions. Current variation in how dyslexia is conceptualised and defined means that some assessors can feel pressurised, if resources are tied to a diagnosis, into giving a definitive label such as dyslexia when they do not actually feel wholly confident about what evidence in assessment outcomes supports that identification or diagnosis. Many specialist teachers and educational psychologists working in or for primary schools feel that ongoing, formative, literacy- based assessments, closely linked to teacher interventions, are more useful in the early years of literacy acquisition, than summative, differential assessment. Not every diagnostician wants to use, or adhere to, the strict diagnostic criteria for a specific learning disorder in reading laid down in, for example, the Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-5), especially where adults are concerned[[6]](#footnote-6).

Some assessors want the freedom to use their professional judgement as they wish, without being constrained by diagnostic criteria or the need to provide specific forms of evidence for diagnostic decisions. Others are concerned about potential inequities in access to assessment, in the criteria used to identify dyslexia, and in access to interventions and support. They argue for a much greater consensus and consistency, guided by benchmarks and qualification levels agreed by the critical majority of professionals in the field.

These issues and debates can sometimes detract from the main aim of any assessment, which is to ensure that appropriate and timely support and intervention, where required, is put in place.

SASC felt that these questions deserved addressing, which is what this paper sets out to achieve.

### 2. Assessors as ‘gatekeepers’ in access to resources.

Before 2019, to apply for support in higher education for a specific learning difficulty via the Disabled Students’ Allowance (DSA), a diagnostic assessment had to be carried out when the learner was 16 years or older. The assessment needed to confirm dyslexia or another specific learning difficulty (SpLD). Assessments could be carried out by a suitably qualified assessor (i.e. one holding a current SpLD assessment practising certificate (APC) or registered with the Health Care Professions Council as a practitioner psychologist)[[7]](#footnote-7). This provided an opportunity to review any earlier identification of a SpLD and reassess the impact of the developmental difficulties.

In 2019 the Department for Education (DfE) waived the age -requirement for assessment evidence supporting applications for DSA. The requirement for a post-16 years assessment was removed on the basis that dyslexia (or another SpLD) should be considered a lifelong condition, so only one ‘diagnosis,’ made at any age, was required. The case was made that it was inequitable, where there had been an earlier assessment, to require an additional post-16 reassessment, given the typical costs of such an assessment, which are rarely state-funded.[[8]](#footnote-8)

Since assessment and reporting guidelines laid down by the Specific Learning Difficulties Assessment Standards Committee (SASC) are required to be met for any report being used as evidence of a SpLD for a DSA application, SASC responded by producing new guidance for the production of an assessment report carried out pre-16 years old. See SASC Pre and Post 16 Report Formats and Additional Guidance.[[9]](#footnote-9)

There have been a number of unintended consequences of this policy change. One key issue is that the ruling embodied a view of developmental literacy difficulties not embraced by all practitioners and researchers in the field. In particular, in some schools, teachers and educational psychologists had been developing theoretical and pedagogic *Assessment Through Teaching (ATT)* and *Response To Intervention (RTI)[[10]](#footnote-10)* frameworks for the initial, and ongoing assessment of and intervention for literacy difficulties. The implementation of continuous assessment frameworks lies at odds with the concept of an early one-off diagnostic assessment that labels a child with a developmental difficulty ‘for life’.

The new DfE requirement that an assessment report with a SpLD diagnosis produced *at any age* could be used as evidence, in the future, for application for the DSA, has exacerbated tensions between groups of professionals. In particular, there have been tensions between educational psychologists and some specialist teacher-assessors working in schools and those working independently or for assessment agencies, from whom parents go to commission a private assessment. The new requirement has unintentionally entrenched the unhelpful idea that *the effects of* developmental difficulties such as dyslexia are unchanging. It has also prompted a resurfacing of debates concerning the use of diagnostic labels, such as dyslexia, in the identification of literacy and learning difficulties. Finally, it has highlighted the way the identification of dyslexia or specific learning difficulty has come to serve a gatekeeper role regarding access to adjustments and resources - which is very different from how labels would usually be used in research. This is especially the case where assessment is required to suggest that a developmental difficulty meets the criteria for a *disability*.

In this paper, it is argued that these tensions could be resolved by identifying criteria and referral and review points for state-funded access to increasingly specialised and comprehensive assessment for persistent literacy difficulties (that might subsequently be identified as dyslexia). Literacy and attainment based assessment(s) can establish the identification of *needs* that require immediate resources and interventions. A *summative* assessment can provide a differential identification, describing developmental, cognitive, environmental and behavioural factors which suggest a developmental trajectory such as dyslexia, requiring ongoing resources, interventions and adjustments, sometimes over a lifetime.

### 3. Labelling

The third important rationale for this paper is to address the issue of labelling. Some practitioners, in identifying literacy difficulties, would prefer to avoid the use of labels altogether, others disagree about which names to use and why.

Every learning difficulty arises (like every medical problem) from a complex combination of the biological, the psychological and the social/environmental. The causes of developmental reading difficulties such as dyslexia are not yet fully understood (see [**SECTION C**](#_SECTION_C:_)) but as O’Sullivan (2021), a consultant neurologist, points out, there are many neurological and medical conditions we can’t fully explain and some we cannot yet ‘cure’ but we do not use euphemisms or enigmatic language when referring to them. Neither do we shy away from identifying and, where possible, ‘treating’ them. We **name them**, e.g. multiple sclerosis, motor neurone disease, Alzheimer’s disease, leukaemia, Long Covid.

Applying names or labels to a grouping of trait-like characteristics with complex and multiple potential causes, acts a descriptive short-cut and reference point for all those concerned, enabling important conversations about managing difficulty. As a result, there is no doubt that, in many contexts, the attribution of a label such as ‘dyslexia’ has utility. Competent and experienced assessors reflect on the evidence gathered, interrogate their own interpretations and seek to be honest with those they assess that there are limitations to how certain they can be about the outcomes of an assessment. Nevertheless, these limitations – however clearly explained – are rarely fully absorbed by individuals at the time of assessment and policy/resource allocation systems are rarely sufficiently flexible to recognise nuance and complexity, which is why labels have an abiding power and function.

Problems do arise, therefore, when we attempt to elaborate those descriptive short-cuts and try to explain what a label such as dyslexia means. Part of this issue simply concerns how to communicate a complex, not-fully-understood phenomenon, in terms that can be readily appreciated, without over-simplification, distortion or inaccuracy. Current assessment practice is very good at identifying distinguishing features of disability at the individual level, but this process is conceptually different to that of scientific, taxonomic classification, based on the aim of identifying and grouping cases from the characteristics that distinguish them from other individuals or other disorders (Talcott, 2021). If we use categorical labels such as dyslexia, we must also be prepared to define exclusionary criteria and say what does *not* constitute dyslexia.

**Assessment and teaching practitioners** are therefore encouraged to:

* Reflect upon the implications of the views and evidence presented in this paper, including the discussion of the use of labels in the identification of neurodevelopmental difficulties.
* Ask their professional associations to develop opportunities for and training in continuing professional development (CPD) and peer-to-peer discussion of the issues raised in this paper.
* Use the document and its references section to update their knowledge base and interrogate their practice.

**Resource managers and policy-makers** may find it useful to**:**

* Use this document to gain a wider understanding of the current landscape regarding the identification of literacy difficulties, including dyslexia, across the UK.
* Understand policy and resource allocation for literacy difficulties across different educational levels and within other organisations and in the workplace.
* Note, discuss, and seek means to implement the recommendations made in this paper.

**Academic researchers in this field** could find it helpful to**:**

* Establish further avenues for ongoing collaboration, discussion and sharing of key research outcomes with assessment and teaching colleagues.
* Use such collaboration to identify areas for future research.

In the next section of this paper, diagnostic criteria and a definition for the identification of dyslexia are proposed, based on a multifactorial, dimensional, risk and resilience model of dyslexia.

## SECTION A: SUMMARY.

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| * There is no doubt that dyslexia, as a diagnostic label, has achieved public visibility. This has not prevented and should not preclude critical assessment of and enquiry into its scientific underpinnings and its usefulness as a diagnostic category.
* There are three key ‘drivers’ for the production of this consultation paper which are: variation in diagnostic practice, the role of assessors as gatekeepers in access to resources and general issues in labelling.
* Greater clarity and consistency in defining and identifying dyslexia supports public understanding, improves assessor confidence and enables clearer policy-making.
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# SECTION B: THE ASSESSMENT OF DYSLEXIA.

## B-1 What is dyslexia?

This section considers the most recent thinking and research regarding conceptualisations of dyslexia and criteria for its identification. As with the identification of all similar developmental conditions, a key question is, ‘what is ***specific*** about dyslexia, despite heterogeneity within the diagnostic category, and co-occurrence and overlap with other diagnostic categories?’ Can the element of subjectivity in interpretation by assessors be reduced if we are clearer about the scientific underpinnings of this phenomenon?

Figure 2. A multilevel framework for conceptualising underlying mechanisms of neurodevelopmental disorders, and of their relationships across different levels of analysis. Key behavioural dimensions, which currently serve as the primary basis of disorder diagnosis and classification are underpinned by a set of cognitive and biological risk factors, with variable expression and impact across individuals. Talcott (2021).

## B-2 Understanding developmental trajectories of dyslexia across different levels of analysis i.e. genetic risk, brain structure and function, cognitive performance and observed behaviour.

### Genetic and environmental risk

Evidence from twin studies and family risk research confirms a strong heritable aspect to dyslexia with a likely interaction between genetic factors and other factors arising from shared family environments as well as a range of environmental factors outside of the child including home and school. This does **NOT** mean that we have valid genetic tests for dyslexia. Molecular genetics studies have found associations with genetic variants but they are very small, and have led to the view that the genetic risk for dyslexia comes from multiple genetic variants that combine to exert their effect.

Since the completion of the Human Genome Project in 2003, scientists are now able to analyse genetic variability across the entire human genome, for comparisons across individuals and/or groups. To date, there are at least nine reported candidate regions of interest for dyslexia across the human genome and at least 14 individual candidate genes. As with all of the dyslexia risk genes so far discovered, the targeted genes are expressed in the brain and impact upon neurodevelopment in at least two main ways: 1. through the way in which neurons connect with one another (structural and functional connectivity) in the formation of neural networks; 2. by influencing neurodevelopment more generally through modifying its structure in pre-natal and early childhood development (Talcott, 2021).

The causes of dyslexia are therefore *expected to be* the results of multiple interacting factors of both genetic and environmental origin affecting the early stages of brain development’ (Paracchini S. 2011).

A study by Eising et al (2021)[[11]](#footnote-11) which is not yet peer-reviewed, involved genome-wide association analyses of individual differences in quantitatively assessed reading and language-related skills in up to 34,000 people. The study confirms that many of the cognitive abilities that implement literacy skill development are constrained by biology. It is now established that about half of the population variability in reading skill is due to hereditary mechanisms and the other half to differences in environments. The paper, which focuses more on traits than diagnostic labels, gets closer to identifying the underlying mechanisms of these heritable effects (although not much closer to how they are implemented functionally through development and with learning).

The significance of this study is that while behavioural data can already distinguish between different developmental trajectories, new evidence from genetics research could, at some future point, add to existing knowledge about developmental trajectories that represent discontinuities of the normal patterns of gene-environment interactions. It might (one day) help to distinguish atypical (dyslexic) patterns of difficulties from those of more simple mechanistic delays, defined quantitatively in a single (normal) distribution of reading skills. However, there are considerable doubts as to whether genetic testing is going to be of any practical use in the practical identification of dyslexia[[12]](#footnote-12).

What it *is* possible to say is that reading difficulties have, therefore, (some) root in biology and therefore cannot be pigeonholed as a statistical artefact or the fertile imagination of parents and educators of children that struggle to read. The interactions between genes and environments generate risk and resilience factors that can mask, increase, complicate, and aggregate the risk of developing dyslexia while also providing protective and compensatory factors.

### Brain structure and function

At present neurological and brain-based assessment and research is the exclusive preserve of neuroscientists and physiologists. It is important to understand that we currently have no brain biomarker for dyslexia and it is questionable that there will ever be one, because there tends to be as much variability within a group of people with dyslexia as between people with dyslexia and people who do not have dyslexia. There is, at present, only very limited, small in magnitude and, from study to study, inconsistent evidence for differential brain structure and function in individuals identified as having dyslexia.

However, while functional neuroimaging techniques show differences in the brains of readers with dyslexia that may *result from* their poorer reading efficiency, some neuroscientists have found (very limited) evidence of developmentally mediated structural differences in these brain areas, both in grey and in white matter, which would be expected to precede and mediate functional differences in their activity patterns. (Talcott, 2021). Other study reviews (Figuccio, 2017) show similar findings in children *at risk of* dyslexia. The longer-term aim of such research could eventually be that children would receive intervention at an early age when their brains are most plastic and responsive. However, many would argue that there is nothing to prevent effective interventions being put in place without such research, especially if we cannot, at present, ‘reliably discriminate developmental dyslexia from other causes of reading failure.’ (Stein, 2017).

Assessors cannot employ the types of laboratory-based tests used in scientific research (where brain scans can yield interesting results) but they can and do already explore, through cognitive testing, some of the behavioural implications of what is already understood about the role of phonological and visual processing mechanisms in dyslexia. Again, it is important to emphasise that research has thrown light on potential risk factors but we are still a long way from:

* ‘Proof’ that these factors, singly or in combination, ‘cause’ dyslexia.
* The ability to conclusively detect the potential influence and interplay of these factors through, for example, the kinds of standardised cognitive tests available for use in this field.

Nevertheless, support for the key (but not exclusive) role of phonological deficits as an important ‘risk factor’ in the developmental trajectory of individuals with dyslexia comes from multiple studies that indicate that individuals with dyslexia perform particularly poorly on tasks requiring phonological awareness, i.e. conscious segmentation and manipulation of speech sounds. Maggie Snowling and colleagues (2019), working at the forefront of research into language learning and reading development, have argued for a more nuanced understanding of the risk factors for a dyslexic profile *and* the risk factors for developmental language disorder, since problems in phonological awareness can underlie both types of difficulty. Whereas poor phonological awareness appears to lessen over time for children with developmental language impairments, it remains as a more constant factor in the profiles of children with dyslexia and can also be detected in many adults with dyslexia (Snowling et al 2019).

Evidence for poor verbal short‐term memory and slow rapid automatised naming in individuals with dyslexia also points to a more basic auditory deficit, perhaps having to do with the quality of phonological representations, or their access and retrieval (Stein 2017). A major focus of Usha Goswami’s research at Cambridge University[[13]](#footnote-13) has been cross-language studies of the impact of deficits in auditory temporal processing on reading development, dyslexia and developmental language disorder. In this theory the phonological deficit is seen as secondary to a more basic auditory deficit located in the perception of short or rapidly varying sounds including frequency discrimination, temporal order judgement, the representation of short sounds and fast transitions, and poorer categorical perception of certain sound contrasts and acoustic stresses. In this view, the auditory deficit is a direct contributor, in the course of development, to a phonological deficit, and hence to the difficulty in learning to read.

Temporal processing may also involve both auditory and visual domains and there is a steadily growing evidence base for visuomotor/attentional/timing deficits being a contributory cause of dyslexia (Meilleur et al, 2020).

A recent study (Manning et al, 2021) sheds some light on the much-debated role of visual processing deficits in some developmental dyslexic trajectories. This study, combining computational modelling and EEG analysis, confirms that children with and without dyslexia differ in their behavioural responses to visual information, specifically visual motion processing, i.e. an important ability contributing to scene segmentation, depth perception and object recognition. The study showed that children with dyslexia are slower to make decisions regarding visual motion.

### Cognitive performance and observed behaviour

A wide body of literature accepts, therefore, that there are neurological and genetic markers which are implicated in individuals with persistent literacy difficulties, with phonological difficulties as *one* primary behavioural marker (e.g. Bruck, 1992; DCSF and Rose; 2009, Berninger and Abbott, 2013), alongside rapid automatised naming (RAN), short term and/or working memory difficulties (Peterson and Pennington, 2012), and, with less current clear evidence, visual processing difficulties. The areas of cognitive testing mandated by SASC derive from this evidence base (see pre and Post 16 Report Formats and Additional Guidance on the SASC website [www.sasc.org.uk](http://www.sasc.org.uk) –Downloads).

## B-3 Refining an explanatory model for dyslexia.

What are the implications for assessment practice? [Figure 2](#Figure_2) (above) shows how dimensional modelling can shift discourse away from unhelpful polarised conceptions of, and theoretical assessment approaches to identifying dyslexia. On advancing this framework, single deficit accounts of dyslexia (e.g. that attribute dyslexia to a single ‘cause’, such as weak phonology, or problems in working memory) will be emphasised less, in favour of frameworks that better acknowledge the individual variability within the risk factors involved, and the highly overlapping nature of dyslexia with other disorders of learning.

A dimensional model allows an assessor to be alert to two important points in understanding developmental difficulties. Firstly developmental difficulties such as dyslexia are likely to have trajectories with some specific features *not shared* by other developmental conditions, i.e. there will be some *specific* developmental mechanisms in dyslexia (Talcott, 2021). Secondly, different developmental conditions can also *share* some underlying risk factors that can compound (or may, much more rarely, compensate for or offset) some of the effects of the specific difficulties in a dyslexic trajectory.

## B-4 Specific and shared features in dyslexia.

### Persistence

There are individuals who experience, from childhood, highly persistent difficulties in the acquisition of literacy skills (reading, spelling and writing). Lower than expected age-related levels of literacy attainment (e.g. in reading fluency, reading accuracy, reading comprehension, spelling accuracy, writing fluency and accuracy) that persist longer than one year, despite intervention, might therefore be viewed as key specific indicators of a developmental literacy difficulty /dyslexia.Snowling, Hulme and Nation (2020, p. 507) argue that ‘the term dyslexia…should be used to refer to a difficulty with decoding and spelling fluency which is evident from the early school years and persistent over time.’

### Risk, resilience, maturation and developmental change

Persistent does not mean unchanging. We also need a model of dyslexia which is able to accommodate an understanding of maturation and developmental change.At least conceptually, it would be useful to understand the changing impact of ‘risk and resilience’ factors (Catts and Petscher, 2021) e.g. compensatory high verbal and non-verbal skills, environmental factors, such as the presence or lack of early and/or sustained support, and cognitive strengths and weaknesses. In scientific enquiry, as Snowling and Hulme (2020) put it, ‘our task is to consider how multiple deficits (across biology and cognition) interact with sources of compensation to produce the profiles of reading disorder that we observe.’ Some risk and resilience factors will also be present for people with *other* developmental conditions and some will be present in people who do *not* develop a specific dyslexic trajectory.

People being assessed often ask, ‘Will I always have dyslexia?’ and assessors, while unable to predict exact outcomes for any individual, need to be able to give a response to this question. Some individuals with dyslexia can compensate for their difficulties, although if there are other, co-occurring difficulties, this can be more challenging. While individuals with dyslexia may always be vulnerable in relation to print-based learning, this may not prove an insurmountable barrier. Snowling, Hulme and Nation (2020) suggest that dyslexia, while life-long in some of its effects, need only be disabling if the individual remains unable to cope with the literacy demands of study or work even when appropriate arrangements are in place. After intervention and maturation, reading and associated difficulties may no longer be *disabling,* although they may remain challenging.

### Co-occurrence of other neurodevelopmental difficulties

There is also the question of the impact and role of other co-occurring difficulties. ‘Dyslexia may be the product of multiple risk factors, and children with a broader range of cognitive and sensorimotor deficits are more likely to develop reading problems’. (Snowling et al 2019). However, as Snowling and Hulme (2020) also argue, ‘having abandoned the discrepancy definition of ‘dyslexia’, a broader range of children with persistent reading disorders is being identified. Dyslexia is now recognised as a dimensional disorder, highly comorbid with other learning disorders.’ Assessors need to be able to recognise instances where more than one developmental issue co-occurs (e.g. co-occurrence of developmental language disorder and dyslexia, or dyslexia and maths difficulties).

### Differentiation: are there other types of literacy difficulties?

A further question is whether the dyslexia label adequately differentiates between *types* of specific literacy difficulties, i.e. where certain features of the persisting literacy difficulty are not typical of a dyslexic trajectory. For example, in a poor comprehender profile, decoding skills can sometimes be good but comprehension lags behind.

## B-5 A model for the identification of dyslexia: definition and diagnostic criteria.

### When, in what formats, and how often should individuals with persistent literacy difficulties be assessed?

A key issue with a summative, one-off, single-time point assessment that identifies an individual as having dyslexia, is that while it may succeed in highlighting that dyslexia is *differential* i.e. itspresentation and effects may vary from typical developmental trajectories, it can sometimes fail to capture a dynamic component i.e. an acknowledgement that dyslexic trajectories are:

* ***Developmental*** i.e.presentation and effects may vary over time in an individual.
* ***Dimensional*** i.e.presentation and effects may vary according to the constant, reciprocal interaction of acquired, developmental, learning and environmental influences, including other possible co-occurring developmental difficulties.

This issue is compounded if differential, summative assessment is administered at a very early age and not followed up and re-evaluated at later stages of an individual’s life. In a nutshell, time is required to ascertain whether or not literacy skill delays can be better explained by alternative, non-dyslexic developmental trajectories such as the temporary delays in the acquisition of literacy skills frequently associated with summer-born children, or delays in literacy acquisition associated with the poor development in early childhood of oral language skills. These kinds of temporary delays can partially or wholly resolve themselves once oral language skills have developed or other appropriate support is put in place.

When gathering background information during an assessment for suspected dyslexia, assessors hear very similar experiences reported. Sometimes the diagnostic interview phase of an assessment takes on a therapeutic function, as the individual recounts, often with some difficulty and emotion, experiences that have caused hurt, humiliation and distress. Commonalities are an early aversion to reading, the (very) late acquisition of reading independence, an acute and abiding dislike for reading aloud, the experience of reading as slow, effortful and non-automatic, difficulties with spelling and writing production, and patchy, or ineffective ‘support’ at school. It can be distressing to hear how some older children and adults have had to work to overcome feelings of inadequacy, how they have had to manage ridicule and misunderstanding or have had to put in place elaborate and often very tiring mechanisms and strategies to manage certain aspects of study or work. The relief following the identification of dyslexia, when an assessment has been properly conducted, should not be under-estimated.

The picture is not always negative. Sometimes individuals with early childhood assessment(s) and a history of consistent support, report positive school experiences, the learning of management strategies, and the necessary mastering of assistive technologies. Many individuals feel other strengths, talents and aptitudes they possess are more important than their literacy difficulties. Those difficulties are a part of their lives but are not necessarily major or significant problems, unless the individual is directly involved in activities that test their weakest skills, such as reading and writing under timed pressure.

How much time, therefore, should be given to test the efficacy of earlier assessments and interventions before referral for a summative, diagnostic assessment? There is a fine balance to be struck between ensuring that a child who is struggling with literacy acquisition receives appropriate assessment and intervention, and the over-early attribution of a label before interventions and maturation have had a chance to take effect and be monitored.

One important consideration here is the concept of risk accumulation. While the life trajectory for any individual cannot be predicted, in earlier childhood, the chances of exposure to the kinds of ‘environmental’ and behavioural risks that might further affect literacy acquisition, such as poor instruction, poverty, demotivation, trauma, frequent school moves, mental health difficulties etc, are reduced. There is a window of opportunity for specialist and intensive instruction to make a difference, despite any heritable and biological risk factors. In later life, the cumulative addition of further risk factors to a developmental trajectory can result in highly complex learning profiles, and make interventions more challenging.

In [**SECTION D**](#_SECTION_D:_) the current UK landscape of intervention and assessment points is outlined and discussed. An argument is made for the need to provide much clearer guidance to schools regarding key referral points for state-funded access to increasingly specialised and comprehensive assessment for persistent literacy difficulties (that might subsequently be identified as dyslexia). Recommendations are made for managing the process of early recognition of need through to, where required, summative assessment.

Although there are theoretical benefits, there are some pragmatic implications of adopting a dimensional approach to assessment. For example, at present, an assessment that gathers comprehensive background information and then focuses on literacy attainment skills *and* carries out cognitive tests can take three hours or more. Add in the investigation of one possible co-occurring ‘dimension’ such as maths, attentional or motor coordination difficulties and time and costs are increased. While referral routes for other potential issues and co-occurring difficulties can always be recommended, this does cause delays and expense for individuals placed on waiting lists for assessment.

A dimensional model in the understanding of developmental conditions such as dyslexia illustrates the urgent need for more collaboration and team work across the range of professionals working in this field. It may also require a new look at recommended formats for diagnostic assessment, allowing for greater flexibility in test choice and reporting guidelines once the likelihood of particular trajectories has been established through diagnostic interview, the gathering of background information and baseline testing.

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| Six concepts have been introduced in this discussion; persistence, dimensionality, risk, resilience, developmental trajectory and risk accumulation. How useful, for assessment purposes, do you think these concepts are likely to prove? What kind of additional training for assessors might be required? |

## B-6 Proposed Definition: Developmental Dyslexia (DD).

The model for the identification of dyslexia presented below calls on an assessor to draw together evidence, gained through diagnostic interview, standardised assessment and qualitative interpretation of assessment outcomes, for key factors that might explain the differential and dimensional impact of early and continuing developmental experiences. The effects of dyslexia *can* change over time and most individuals who have dyslexia can learn to read, write and spell, to a functional degree. In older children and adults, functional reading skills can be acquired but the impacts of underlying weaknesses in cognitive skills can persist and affect performance in a wider range of contexts, especially when individuals are required to employ literacy skills under sustained time-limited constraints.

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| **Developmental Dyslexia (DD): a proposed definition****In childhood, persistent word level difficulties (in reading, spelling and writing accuracy, fluency, and automaticity) which prove resistant to standard reading instruction and which require additional, specialised and intensive intervention, can be identified as dyslexia. Such difficulties will be characterised by ongoing delay in literacy skill acquisition and automaticity.****Multiple risk factors influence the impact and trajectory of the developmental literacy difficulties. These can include genetic and environmental influences, cognitive strengths and weaknesses, and co-occurring developmental and other difficulties. Resilience factors can include compensatory intervention, the effects of maturation, and good verbal and oral language skills. These factors will lead to varied levels of manifestation and impact in older children and adults.** |

## B-7 What criteria should be used to identify dyslexia?

By gathering a detailed background history and consulting with parents, teachers and support staff before testing, a number of other potential factors, such as type of reading instruction, the effectiveness of previous interventions, other early linguistic experiences, and a history of visual and hearing difficulties, can be considered and their significance as contributors to the development of current difficulties can be evaluated.

The SASC pre and Post 16 Report Formats[[14]](#footnote-14) provide a model for consistent summative assessment practice in this field, supported by recommended, reviewed and evaluated testing materials. The work of STEC, SASC’s SpLD Test Evaluation Committee, in its thorough and careful reviewing of published test materials, has given assessors the tools to evaluate and choose appropriate tests[[15]](#footnote-15).

Assessors rely on the interpretation of tests that capture ‘behaviours’ i.e. responses to tests designed to explore a variety of skills and abilities, including phonological, processing and rapid naming skills, intellectual capacity, attention and concentration, language and communication, visual-spatial abilities, and memory. There are limitations to these tests but assessors are increasingly sophisticated and knowledgeable in the use and interpretation of such tests. Testing of attainment and cognitive skills, using quantitative, standardised tests alongside qualitative assessment tools, does provide a level of objectivity.

However, what these formats do not provide, in full, are guidelines as to how to interpret and describe test outcomes as contributing, or not, to the identification of a developmental trajectory that suggests dyslexia.Although the interpretation of assessment outcomes is covered in the qualifications and training of specialist teachers and psychologists, this has not prevented under-confidence and variation in reaching diagnostic conclusions.One of the aims of this paper is to fill that gap and to propose a framework for a better understanding of the interpretation of assessment outcomes, applicable to a wide range of assessment contexts.

Assessors have relatively few difficulties in applying and interpreting the wide range of literacy-related attainment tests available. These tests can provide age-related standardised scores and can also be used for qualitative interpretation, such as error analysis. The more controversial issue here is how to accurately characterise and describe the **potential underlying reasons** for such reading and associated literacy difficulties. In the following section we address these questions.

## B-8 Risk Factors.

Listed below are risk factors implicated in persistent literacy difficulties. It is highly unlikely that any *single* risk factor below could be seen as sufficient to identify dyslexia but taken together, a grouping or ‘accumulation’ of these factors may provide a framework to support the attribution of a label such as dyslexia.

It is important to recognise that we simply do not yet know the extent to which any of the genetic, biological and cognitive factors listed below ‘cause’ dyslexia in any single individual. They are likely to be *implicated in and affect the impact of* the functional literacy difficulties but the nature, origins and development of these interactions is highly complex and beyond the analysis afforded by the standardised assessment tools available to assessors. These tools can reveal useful insights into patterns and levels of cognitive difficulty at the time of assessment. They *support* a ‘triangulation’ model that identifies dyslexia as persistent and marked difficulties in reading accuracy and fluency which can affect reading comprehension because they may throw light on the ways in which those difficulties manifest in the individual concerned. These reading difficulties, alongside associated difficulties in spelling and writing fluency and accuracy, develop in childhood and often prove resistant to standard instruction.

As assessors, we can describe such patterns and levels of cognitive difficulty and discuss how they present and accumulate in an individual’s profile. Most importantly, we can suggest how these factors may affect teaching, intervention and management strategies. What we cannot reliably claim from the test results is a **direct causal relationship** between these underlying factors and dyslexia (e.g. that a working memory difficulty ‘causes’ dyslexia).

### Genetic and biological risk factors

Assessment at the behavioural level cannot, therefore, determine the potential influence of genetic and biological risk factors in dyslexia. It can only try to ascertain the **impacts** of what appears *specific* to dyslexia, i.e. evidence for highly persistent developmental difficulties in literacy.

* **Family risk**, i.e. other close family members identified with similar developmental difficulties. Assessors, when gathering background information at assessment, can and do explore family risk, i.e. similar patterns of developmental difficulty in the immediate and wider family. Not because anything can be done to *prove* a heritability factor in any individual case of dyslexia, nor that family risk should be used as a single marker for dyslexia identification, but because such evidence represents a potential explanatory ‘risk factor,’ in turn a potential influence upon a developmental trajectory. To explore the issue of family risk is not the same as suggesting that dyslexia is an inevitable outcome if other family members are dyslexic, or that it is a condition with unchanging effects. Similar questions in a different context might be asked by a doctor enquiring whether there is a family history of, for example, heart disease or diabetes, simply because *a greater risk* is indicated.
* **A developmental and persistent history of reading and associated literacy skill (spelling and writing) difficulties** which occur despite standard instructionand which may require ongoing support. This is a key indicator. Dyslexia (unless acquired due to brain injury or accident) does not suddenly emerge in later life, although there can be circumstances where an individual (and their family) may have masked early and ongoing difficulties. These circumstances will require sensitive and careful investigation.
* **Literacy test scores** (in one or more standardised tests of reading accuracy, reading fluency and spelling) at least 1 Standard Deviation (SD) below the mean. Persistent and marked difficulties in reading accuracy, fluency, and/or reading comprehension, which develop in childhood and prove resistant to standard reading instruction will often be most evident if the individual is required to read aloud. There is a strong case for persistently weak reading fluency to be seen as the key ‘behavioural’ indicator of dyslexia, the factor most likely linked to underlying neurobiological ‘drivers’ and therefore most resistant to compensatory environmental and cognitive factors. The largest-scale and most comprehensively standardised tests of reading, such as the WIAT-III, the WRAT5, the AAB, the WRMT-III and the FAR[[16]](#footnote-16), in their standardisation, all conduct validity studies comparing the performance of people, in their normative samples, with and without an identified learning disability. In the AAB, for example, the largest subtest discrepancy between the normative sample and the specific learning disorder (SLD) sample is on the Reading Fluency subtest. While approximately **2.7%** of the normal distribution sample would typically obtain a score less than or equal to a standard score of 69, on average **32.4%** of the SLD sample obtain a score in this range across all AAB subtest and composite scores, with **47.3%** achieving a score in this range for the reading fluency sub-test.
* **Lack of automaticity in speeded or time-pressured tasks** involving elements of simultaneous listening, reading, writing, or expression e.g. note-taking in class or lectures, minute–taking in meetings, word-finding when making presentations or contributing to discussion.
* **Oral communication and / or listening comprehension skills better than** **reading skills.**

* **Academic functioning affected**, such that progress is less good in literacy-based areas of the curriculum than that of age-equivalent peers in a similar setting, or that average academic functioning is sustainable only by extraordinary levels of effort or support[[17]](#footnote-17).

### Cognitive risk factors

Cognitive factors may influence **the impact and severity** of the literacy difficulties. Their impact may vary from individual to individual, especially where there are co-occurring developmental difficulties, e.g. poor language at school entry, mathematics difficulties/dyscalculia, ADHD, Developmental Language Disorder (DLD), Developmental Coordination Disorder (DCD), and autism.

* **Persistent** (i.e. ‘training’ resistant) **difficulties in phonological awareness** (e.g. phoneme awareness, rime awareness). Weaknesses may be detected in tests of phonological skills, non-word repetition, word finding (semantic fluency) and new word learning, i.e. difficulties pronouncing new or unfamiliar vocabulary, although these weaknesses may also be features of co-occurring language difficulties. In both child and adulthood, difficulties may also be noted in tests of speeded non-word naming.
* Weaknesses in one of more of: **working memory** (especially **verbal short-term memory**), **processing speed** (**visual and/or auditory**) and **speeded naming e.g. of familiar objects and digits (RAN)**. Weaknesses in *all* these areas will not always be found. Where they are, their effect on the literacy difficulty can be explored.
* **Co-occurring auditory, visual or sensory processing anomalies** (e.g. problems in speech, visual-perceptual sensitivities, attention control) associated with an unusually high degree of sensitivity to aspects of visual or auditory stimuli, which may affect patterns of impairment and response to intervention.

### Environmental risk factors

* It is not yet clear how **family environment** may affect the development of dyslexia, although it is clear that reading ability appears to drive how much children read outside of school.
* Given that reading is a learned skill requiring practice, the **classroom /school / work / study environment** is also undoubtedly influential. Environments can worsen/intensify the impact of the literacy difficulties, or lessen their impact. Wherever possible, assessors need to ask questions about the kinds of interventions that may already have been put in place and how successful they may have been. For example, an individual may have employed, successfully, strategies to manage their difficulties and been consistently supported by their school to do so. They may have achieved qualifications enabling them to gain a job, a place at university or a place on an advanced training course. However, they may continue to experience severe problems in managing literacy based activities, under **timed pressure**.

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| The only recommended standard score ‘cut-off’ point is for 1SD below the mean in **one or more** standardised test of reading accuracy, reading fluency and spelling, given the strong evidence to link these behavioural outcomes with developmental dyslexia. Do you agree with this?  |

## B-9 Resilience Factors

The following form **core** **resilience factors** which can mitigate the *impacts* of dyslexia:

### Genetic and biological resilience factors

* High levels of aptitude / talent in a non-literacy-based domain, e.g. in music, art, conceptual mathematics, sport etc. Where individuals are developing or have pursued these talents and aptitudes, they may bolster ‘transferable’ determination, self-confidence and self-worth, provide study and career paths, and may offer the potential for interventions and support for literacy difficulties to be built around specific interests and skills. However, as argued below, there is, as yet, little evidence to support the idea that individuals with dyslexia are ‘uniquely’ or especially creative, entrepreneurial, gifted visually etc.

### Cognitive resilience factors

* Good verbal (oral language) and /or non-verbal skills. There are highly problematic issues *for diagnosis* around the use of IQ-achievement discrepancies within an individual’s profile (see **B-11** below), discrepancies can highlight skills and abilities that may help the individual manage aspects of dyslexia. Where there is no problem in verbal and vocabulary skill and knowledge, this does suggest that *other* factors are contributing to the persisting difficulty. IQ assessment can have a role in informing the assessor as to the appropriateness of recommendations and can identify resilience factors in the learner’s profile.
* Absence of co-occurring developmental, mental and/or physical health difficulties. It should be noted that, more rarely, some aspects of co-occurring conditions may also be useful for anyone who experiences them. For example, an individual with dyslexia *and* the hyperlexic abilities associated with autism may have less difficulty with decoding and word recognition skills, although they may still experience problems with processing speed, affecting reading fluency.

### Environmental resilience factors

* Early and sustained identification and /or intervention and support.
* High levels of motivation, persistence, self-management and self-esteem.
* Accrued knowledge and life experiences.

### Resilience factors- behavioural outcomes

* With maturation, reading fluency is likely to remain an issue, but comprehension and accuracy may be much less, if at all impaired (or only, as would be the case for most people, where there is an absence of prior knowledge and a conceptual framework regarding the subject-matter being read).
* Spelling accuracy, especially when involved in the process of writing production, may still be impaired but the individual has acquired use of strategies (e.g. via use of assistive technology) to manage this difficulty in most contexts.
* Current literacy scores may be variable and nearer or at age-equivalence, except for reading fluency, which will still be lower than expected for age.
* Academic functioning may not be affected, as long as some support measures (e.g. additional time in written examinations) remain in place.
* Certain features of a co-occurring condition or other ability (e.g. exceptional verbal knowledge in high-functioning autism), may mitigate some of the impacts of dyslexia.

## B-10 What is not dyslexia?

The model presented above, with its emphasis on the interaction between risk and resilience factors, moves away, conceptually, from a categorical view of dyslexia. However, pragmatically, for assessors, there remains a need to have some criteria that can inform a decision not to attribute this label, or another, such as developmental literacy difficulty.

Identifying someone with a developmental difficulty is a complex process because the underlying mechanisms of that difficulty are complex. Assessors are aware that there is subjectivity in the process, and that they need to be aware of bias and of cultural and cognitive factors in their own practices that might influence decision-making. That is precisely why assessment requires as many sources of relevant information and evidence as possible.

In the model of dyslexia presented above, the following factors may rule out the identification of dyslexia or be reasons to delay a specialist assessment until further information is gathered about response to current interventions.

### In children

* After 6 to 12 months of sustained and monitored interventions for literacy needs, there is a *significant* narrowing of an age-related attainment gap in functional reading, writing or spelling skills. Background information gathered at assessment, alongside test outcomes, identifies other possible explanatory factors for weaker literacy skills, e.g. low oral vocabulary levels and / or other medical, social, or linguistic factors affecting literacy acquisition, but all signs are that the child’s difficulties are temporary, that significant progress has been made in decoding and that the child is now able to generalise from the orthographic knowledge gained to decrease their reliance on a decoding strategy, supporting reading and spelling accuracy and fluency.

### In adults (i.e. 16+ year olds)

* The background information and biographical information supplied shows no indicators of developmental problems in reading, writing or spelling. The individual learned to read at the expected age, and read all they needed or wanted to as a child. There were no particular issues in learning to spell or in writing. Standardised tests of literacy show no evidence of below average reading or spelling accuracy/fluency issues at the point of assessment. The individual may be currently feeling under sudden pressure in work or study and seeks an explanation for difficulties that have emerged unexpectedly.

### In both children or adults

* One or more of the following factors could contribute to weak literacy performance: these factors do not always rule out dyslexia but they need to be taken into consideration and some cases will form the primary reason for the developmental delay in literacy acquisition:
1. Linguistic and residential history i.e. history of opportunities to speak, read, write and spell in English.
2. Certain medical conditions that can affect aspects of learning have been identified and their impact on learning confirmed.
3. A mental health issue.
4. Other developmental condition e.g. developmental language disorder, developmental coordination disorder, ADHD, autism etc.
5. Highly disrupted educational experience, migration, family, cultural or personal trauma, bullying and social isolation, family instability or crisis.
6. Vision and hearing checks have not recently been carried out but some problems are noted and an assessment of these needs to take place before any other conclusions are reached.
* When the individual feigns certain types of responses to tests to gain access arrangements e.g. extra time in exams. Rare but it does happen. The reasons for feigning can be merely instrumental (to ‘game’ the system) or may reflect other, more complex issues.
* When performance on tests administered is very low indeed, i.e. standard scores in the range 65 or below across *all or the majority of domains*, attainment and cognitive.

## B-11 How did SASC arrive at this definition and diagnostic criteria? Exploring the debates.

While there are commonalities between existing definitions of dyslexia, they vary in inclusionary criteria, terminology and implied diagnostic criteria. Additionally, there are a number of prominent ‘dyslexia myths’, that do not seem to be supported by evidence. One key task for the Working Group was to explore the most recent research in each of these areas, asking whether a greater level of consensus and clarity about ‘what dyslexia is*’* could be achieved.

**Figure 3. Five problems in achieving consensus.**

### Adequacy of existing conceptualisations and models of dyslexia.

Elliott (2020, p. 568) suggests that dyslexia is ‘rather different’ from categories such as attention deficit hyperactivity disorder, obsessive compulsive disorder and clinical depression, for which, he says, explicit, agreed, criteria are specified in psychiatric manuals, despite heterogeneity within these diagnostic categories, overlap between diagnostic categories and an element of subjectivity in their interpretation by clinicians. Elliott suggests that there is currently too great a level of variation in conceptualisations of (and thus operational ‘diagnostic criteria’ for) dyslexia and that there is no clear ‘cut-off’ between individuals labelled as having dyslexia and ‘poor readers’.

It is true that there is, now, a *greater* level of agreement for some of these other diagnostic categories but none of these diagnostic categories remains uncontested and, because these conditions are still not completely understood, there will continue to be developments in the ways in which they are described and conceptualised. Their *causal basis*, though in some cases (e.g. for attentional difficulties) supported by recent Genome-Wide Association Studies (GWAS), remains relatively unspecified (Karlsson Linnér, Mallard, Barr, et al, 2021). For most developmental difficulties, such as developmental language disorder (Bishop, Snowling, Thompson, and Greenhalgh, 2016 and 2017), developmental coordination disorder (Blank et al, 2019), and attention deficit hyperactivity disorder (Faraone et al, 2021) broad consensus around definitions and diagnostic criteria has been reached but is relatively recent and has been arrived at using different methodologies. Silberman (2015) has documented the politics of evolving and still-contested conceptualisations of autism and these changes have been have recently been summarised by Happe & Frith (2020). For all these learning and developmental conditions, it is recognised that there is overlap and co-occurrence, suggesting multifactorial and dimensional causality and presentation (Gialluisi, A., Andlauer, T.F.M., Mirza-Schreiber, N. *et al.* 2019).

### Variation in existing definitions and assessment criteria: Rose, DSM-5 and ICD-11

Historically, much of the research literature in this area continues to define a specific learning difficulty (dyslexia) as an ‘unexpected underachievement’ in literacy in relation to ability measures in the average (or higher) range (Nielsen et al. 2016). Typically, participants with dyslexia in research studies will be expected to show very low levels of literacy attainment, typically **-1.5 SDs** below the mean (Snowling, 2013). Why is this problematic?

**The Rose Report (2009) definition**[[18]](#footnote-18), widely adopted by assessors, enshrines the view that literacy attainment is a continuous variable and hence that the arbitrary imposition of cut-off criteria is invalid. This conceptualisation makes prevalence estimates for dyslexia problematic because *many* children and adults, perhaps close to a fifth of the UK population, currently have problems with literacy acquisition or literacy skills. Do all these people have dyslexia? There *is* therefore reason to be concerned, as Elliott (2020) is, about how some conceptualisations of dyslexia are ‘playing out’ in practitioner settings, and he is correct that differing models for identification (including IQ-attainment discrepancy models) wax and wane in popularity and use, causing inconsistency in how diagnostic conclusions are reached.

This inconsistency has been documented by Ryder and Norwich (2017) in their report on the practice of SpLD assessment in higher education; research participants included both specialist teacher assessors (STAs) and educational psychologists (EPs). The authors questioned a widespread contextualised interpretation of literacy difficulties (meaning that literacy attainment below the population mean was not routinely required as a diagnostic criterion), a persistent use of discrepancy models, scepticism about the available test battery and a consequent (over)-reliance on experience and clinical judgment. They noted ‘tensions inherent in dyslexia assessment between statistical rigour and professional experience, compounded by current research positions accepting the complex interactive nature of human functioning…’ (Ryder and Norwich, 2017, p123). Ryder and Norwich (2017, p 110) also point out the need for diagnostic criteria, particularly where the purpose of assessment is to give access to statutory disability support such as the Disabled Students’ Allowance (DSA), and offer the following cautions:

* Assessors be aware the label's use can perpetuate inaccurate assumptions and unfair access to disability provision.
* Lecturers be aware of the diversity subsumed within the dyslexia label.
* Legislative and institutional policy makers be aware of the equity implications of unexamined assumptions about dyslexia's range of functional limitations.
* The identification of dyslexia is not necessarily synonymous with disability eligibility.

Similar concerns are raised by McMurray et al (2018) in a paper exploring the assessment skills of those responsible for Joint Council for Qualifications (JCQ)[[19]](#footnote-19) access arrangements assessments testing.

The Diagnostic and Statistical Manual of Mental Disorders (2013) is widely used by clinicians and researchers for the classification of mental and developmental disorders in the USA. In the UK, it is not so often used for the identification of specific learning disorders, perhaps because of an historical greater resistance to the idea of a top-down, rather ‘medicalised’ model being applied to specific learning difficulties. ICD-11, the International classification of diseases for mortality and morbidity statistics(2018), represents the diagnostic classification standard for all clinical and research purposes and is widely used in Europe, but is also not particularly adopted in the UK for the identification of reading difficulties.

The term *dyslexia* is not used in DSM-5 and is subsumed by the term ‘specific learning disorder in reading’ (315.00 DSM-5). A *specific learning disorder* (SLD) is characterised as a type of neurodevelopmental disorder that impedes the ability to learn or use specific academic skills (e.g., reading, writing, or arithmetic), which constitute the foundation for other academic learning. Neither is the term dyslexia used in the ICD-11 classification, which instead uses ‘*developmental learning disorder with impairment in reading’* defined by ‘significant and persistent difficulties in learning academic skills related to reading, such as word reading accuracy, reading fluency, and reading comprehension.’ Di Folco, Guez, Pyre and Ramus (2020) present a useful comparison of how these two major medical classifications (ICD-11 and DSM-5) define diagnostic criteria that partly differ, are open to multiple interpretations and have consequences for who is diagnosed with ‘dyslexia’ (if this term is seen as synonymous with specific learning disorder) and therefore for prevalence estimates.

The DSM-5 (APA, 2013) outlines four diagnostic criteria, all of which must be met before a specific learning disorder (DSM-5 terminology) can be identified:

1. Difficulties must be unexpected in relation to age, level of education, level of experience and level of other attainments.
2. Difficulties should be specific and persistent.
3. Difficulties must not be solely caused by other factors such as: inappropriate teaching or gaps in education; social and personal factors; incomplete mastery of the language of instruction (e.g. EAL/ESL[[20]](#footnote-20)); intellectual disability (in DSM-5, this equates to approximately two standard deviations or more below the population mean, i.e. ability scores of 70 or below.)
4. Difficulties should not arise from another neurological, physical or mental health condition.

Elliott (2020) argues, in line with the changes in DSM-5, for a shift towards reconceptualising dyslexia as *primarily* a developmental reading disability. He also suggests an accompanying rejection of some of the other trappings that the label has acquired, i.e. the view that it is a neurocognitive ‘difference’ with accompanying ‘gifts’ such as good visual-spatial skills, a tendency towards creativity and lateral thinking etc.

Support for this view comes from a recent meta-analysis of twenty studies, (Erbeli, Peng and Rice 2021) which analysed the summary effects of mean and variance differences in creativity between groups with and without dyslexia. The results suggest that individuals with dyslexia as a group are no more creative or show greater variability in creativity than peers without dyslexia, although, compared with adolescents, *adults* with dyslexia showed an advantage over non-dyslexic adults in creativity. While it is perfectly plausible that the developmental trajectories of individuals with dyslexia may lead them, in adulthood, to develop and enhance non-literacy-dependent skills, there is little evidence as yet to support the idea that dyslexia, biologically, confers ‘inbuilt’ advantages in, for example, creative or visual-spatial skills. While it is an understandable response to negative framing of dyslexia, one of the most prominent, unhelpful and oft-repeated ‘dyslexia myths’ is that individuals with dyslexia possess ‘unique’ skill-sets and talents, such as creative problem-solving and logical reasoning skills. Many individuals with dyslexia *will* have or develop such skill sets and talents, but there does not appear to be anything intrinsic to dyslexia that ‘causes’ them to possess those talents.

### Identifying the specificity in dyslexia

In line with the DSM-5 four key diagnostic criteria outlined above, at present, typical assessment practice, alongside standardised testing, applies exclusionary criteria, based on prior and current case history, to rule out other potential causes of a reading achievement deficit, for example the presence of very low global IQ, underlying sensory or neurological impairment, or obvious environmental factors, such as very recent and incomplete English language learning. There is little that would be controversial, where there is clear evidence to support this, in attributing delayed or weak development of literacy skills to any of the factors listed above, rather than dyslexia.

However, where the identification of dyslexia is based on a process of ruling out other, less clearly evidenced, ‘causal’ factorsfor literacy difficulty, there can be problems. For example, one or more of the elements identified in the DSM-5 criteria (i.e. inappropriate teaching or gaps in education; social and personal factors; incomplete mastery of the language of instruction (e.g. EAL/ESL); intellectual disability, i.e. ability scores of 70 or below) may *affect* a dyslexic trajectory.

As a consequence, an identification of dyslexia is highly sensitive to what information can be ascertained at assessment (e.g. about the appropriateness and extent of earlier interventions) as well as the nature of the assessment procedures, including which tests are administered and by whom, and how diagnostic thresholds are determined. For example, assessment of individuals with English as an additional language or a complex linguistic history requires an extra emphasis on knowledge and understanding of how a first language(s) (L1) might affect performance in tests of literacy attainment and cognitive processing in a second language (L2) i.e. English. Post March 2020, literacy skill acquisition may also have been affected by the Covid 19 pandemic. Given the practical difficulty of disentangling this factor from others, how could its influence on literacy attainment test results be accounted for?

Furthermore, while some in the UK use the phrase *specific learning difficulty*, *specific learning difference or specific learning disorder (SpLD)* as an ‘umbrella’ termto describe a range of developmental difficulties with key and differential specific effects (e.g. on reading, on motor-coordination, on attention, on language comprehension, on numeracy), there is another, more contentious interpretation of the use of the word ‘*specific*’ as difficulties (e.g. in reading) that are *‘out of line’* with, or *unexpected* compared to, *some* but not necessarily all aspects of measured IQ or other measures of academic attainment or cognitive skills.

In a significant shift, the (newest) DSM-*5* diagnostic criteria for a specific learning disorder (SLD) abandons an IQ-Achievement discrepancy criterion.[[21]](#footnote-21) Intellectual assessment is no longer required for a DSM-5 diagnosis of SLD, except when intellectual disabilities are suspected. Similarly, in DSM-5, there is no requirement for the neuropsychological assessment of cognitive processing skills for a diagnosis of SLD: such assessment might inform intervention plans but is not required for diagnosis[[22]](#footnote-22).

 In contrast, in the ICD 11, performance in the academic domain (reading, writing or arithmetic) must also be below expectation in relation to age *and* in relation to intellectual ability, therefore retaining some elements of the IQ-discrepancy definition. This rather confused position reflects a level of uncertainty about how the issue of ‘unexpectedness’ or discrepancy in a profile should be understood and explained.

### The problem of unexpectedness

In the UK there has been an unresolved dialogue, within the profession, between those who see attainment tests in reading, spelling and writing skills as providing the most diagnostically useful information in assessment, and those who see cognitive and IQ tests as the most important factor in drawing together a descriptive ‘profile’ of the individual, and in providing an explanatory framework for diagnostic outcomes. In the latter view, ‘impacts’ on attainment skills, such as reading, are seen as deriving from underlying weaknesses, in, for example, working memory or processing skills. Those impacts are often described as ‘unexpected’ given an individuals’ cognitive ‘strengths’ e.g. in verbal or non-verbal domains. Occasionally, underlying weaknesses, in, for example, working memory or processing skills, are reported as worthy of consideration in their own right.

There is a group of children and adults with quite severe decoding and reading fluency difficulties and, sometimes, impairments in other cognitive, motor and behavioural domains, but no or much less difficulty in the oral language skills that affect, for example, listening comprehension, verbal and listening comprehension skills and, to a degree, reading comprehension. This group appears to form a sub-group within those with more general reading difficulties. As such they are often identified as having dyslexia because their reading and literacy difficulties appear to be out of line with other aspects of academic potential, attainment or achievement.

This issue of ‘discrepancy’ has posed one of the most intractable issues in the identification of dyslexia (Holden, 2015) because there are no clear criteria or firm evidence bases:

* For what level or severity of discrepancy ‘signals’ a dyslexic profile.
* Between which criteria (e.g. between IQ and attainment, or between different cognitive abilities) a discrepancy should be measured and why.
* To explain developmental profiles where there is less contrast between literacy attainments and other assessed cognitive skills, or contrast between just one single factor, e.g. working memory, and literacy attainment.

While there is no doubt that some subjective biases are inevitably built into any assessment process, in assessment practice, the notion of *unexpectedness* is therefore very vulnerable to inconsistent interpretation.

Elliott (2020) argues that, ‘It is now widely accepted that unexpectedness on the basis of IQ and cognitive measures, whether involving total scores or profiles of cognitive strengths and weaknesses, should no longer be used for diagnosing dyslexia, or the broader category of learning disability.’ He proposes that assessors should move away from identifying psychometric strengths and weaknesses in a cognitive profile for the purpose of *diagnosis*, but rather investigate these skills because they may shed light on appropriate educational *interventions*. ‘Unexpectedness’ can still be ascertained in relation to age, level of education, level of experience and level of other attainments. For example, an individual with a postgraduate degree in mathematics may read very slowly and inaccurately and experience difficulty in proof-reading and checking their own written calculations. Their standardised scores on tests of reading fluency and accuracy indicate that their reading skills are considerably weaker than average for their age-group.

Intellectual cognitive strengths and weaknesses may, therefore, be better conceptualised as ‘risk and resilience’ factors in the developmental trajectories of individuals identified as having dyslexia, because they will affect mechanisms that have influenced the acquisition of literacy skill, leading to non-typical development of reading, writing and spelling skills. For example, using model-based meta-analysis and simulation, and a difference between listening and reading comprehension as a proxy for unexpected reading difficulty or dyslexia (an alternative and possibly preferable operational definition of reading difficulty to the IQ-achievement discrepancy) Wagner et al (2020) found that samples of poor readers will contain more *expected* poor readers than unexpected or dyslexic readers, which *does* suggest a differential developmental trajectory for readers with dyslexia. Given that underlying phonological difficulties are not exclusive to developmental dyslexia and make it very difficult to distinguish dyslexia from other causes of reading difficulties, discrepancies between children’s oral communication, comprehension and listening skills and their reading skills could therefore provide an additional means to distinguish dyslexia from other reading difficulties. (Wagner, Zirps and Wood, 2022).

Good assessors already weigh up the ‘converging evidence’ from individual histories in relation to *all* the information emerging from background information supplied and tests administered at assessment, and not just the cognitive and/or IQ strengths identified. From those histories and test results, risk and resilience factors will emerge that that will be implicated in particular trajectories and be suggestive of appropriate interventions.For example, good performance on verbal reasoning tests (which may sometimes be attributable to, at least in part, economic or environmental factors, such as middle-class access to ‘cultural capital’ which has boosted verbal skills) acts as a ‘resilience’ factor in the profiles of many individuals with dyslexia. It can sometimes facilitate good comprehension skills despite a persisting and sometimes severe weakness in reading fluency.

Arguably, then, an individual should not be identified as having dyslexia because there is a contrast between their verbal IQ and their literacy skills, or because there is a contrast between their verbal IQ and their scores on tests of processing speed and working memory. It is rather that each of these test outcomes need to be considered as factors which contribute to a specific developmental trajectory.

This conceptualisation may help overcome one of the most intractable issues in conceptualisations of dyslexia (and many similar ‘conditions’) which is that of the understandable resistance to being labelled with a condition that primarily suggests a ‘deficit’ or ‘lack’ of something. In this model of risk **and** resilience, the concepts of probability and genetic diversity illustrate how multiple risk and resilience factors may accumulate to produce particular developmental trajectories which can be described as dyslexia, in the same way as risk and resilience factors influence the development of other psycho-social conditions and some medical conditions.

## B-12 Why retain the dyslexia label?

There are political and pragmatic difficulties in abandoning labels which are now widely used. It is SASC’s view that the label dyslexia needs to be better defined and its diagnostic criteria laid out more clearly, rather than abandoned. There needs to be clearer, state-funded routes to assessment for dyslexia and a more coherent, transparent and accessible set of policies regarding assessment and intervention across all education levels.

It is, however, important to recognise that there are valid arguments for the use of alternative labels, and some arguments for the use of no labels. These arguments are explored in more detail below.

One possibility would be to acknowledge the use of *alternative but broadly equivalent* labels, e.g. Developmental Dyslexia (DD) or Developmental Literacy Difficulty (DLTD). This would bring terminology into line with other recognised specific developmental difficulties, i.e. Developmental Coordination Disorder (DCD), Developmental Language Disorder (DLD) and with some aspects of DSM-5 and ICD revised definitions. It would also place the weight of identification, whatever the label used, around the central issue of the mechanisms surrounding the development of decoding, fluency and comprehension problems in learning to read as well as other closely associated literacy issues such as spelling accuracy and writing fluency.

### Can labels be double-edged?

Any label can be double-edged. There are positive implications and consequences (self-understanding and self-acceptance, rights to and protections of adaptations and additional resources/provision). Seen from this perspective, a label facilitates access to support and self-determination. There can also be negative connotations (potential discrimination and risk of further disadvantage and denigration, self-blame etc.). In some cultural milieu, *any* label associated with ‘disability’ is perceived as negative.

A further downside of putting a name to something is potential over-diagnosis. There are some who believe that the label of dyslexia has become too broadly applied. Others, looking at the role of diagnosis in the field of special educational needs (SEN) from a social constructionist and relational perspective, argue for *further* application of the label ‘dyslexia’ so that it is *less* closely guarded, and democratically accessible to all who experience the typical and persistent difficulties associated with a reading difficulty (Cameron, 2021). Arguably, if the use of the label ‘sweeps up’ a number of false positive identifications, this is likely to be a safer outcome, protecting the rights of the individual, than the reverse scenario, which is the potentially serious denial of needed resources.

### Labels and identity

Having dyslexia can become a central part of an individual’s identity and sense of themselves. The persistence of the use of the term dyslexia is linked to this social-psychological reality. The lived experiences of people with this condition, their voices and perspectives, their feelings about the label, need to be understood. Removing, re-naming or reconceptualising the term thus has implications for those already identified as having dyslexia (MacDonald, 2013). Dyslexia is a lived identity based on both social and biological determinants and is not just the possession of those applying the labels.

### **Labels as categories or continua**.

Representing the diagnosis of a condition in terms of a spectrum or continuum has the benefit of accommodating some diversity of characteristics, but it does not overcome the use of the label. It just refines it. ‘Borderline’, ‘mild’, ‘moderate’ or ‘severe dyslexia’ become categories that call for a cut-off; *on the dyslexic spectrum* is still distinct from *not being on the dyslexic spectrum*.[[23]](#footnote-23) Are poor readers best described as statistical outliers or do they form a distinct subgroup from typical readers? We have not yet resolved how an individual who does not meet the criteria for dyslexia but clearly has literacy and other learning difficulties, should be placed within *other* categorisations of learning difficulty, such as no persistent difficulty (but a temporary one), or mild intellectual disability/moderate/severe learning difficulty.

The standard approach adopted by educational systems and researchers alike is to classify children categorically according to the particular area (for e.g., reading or mathematics) in which they are experiencing problems, and thereby applying a diagnostic label (for example, dyslexia or dyscalculia) if the difficulties are severe enough. This pragmatic approach has considerable benefits for the individuals who meet the diagnostic criteria adopted, but many children with relatively mild (i.e., those that do not meet the diagnostic threshold) problems go undetected, particularly if the statistical cut-offs chosen are very conservative.

### Dyslexia as a difference, difficulty, or disability?

Given the UK’s pressurised examination system, there will be people, because of variation in thinking and cognitive style, (e.g. slower processing speed) who may find it more difficult than others to cope with, for example, academic performance under a time-pressured situation. Perhaps it is in these instances that the concept of learning *difference*, or learning *need,* rather than specific difficulty or disability, is more useful?

Most people find some aspects of learning more difficult than others and this is normal. Slower than average processing speed as a single area of cognitive weakness in a profile is something many assessors encounter but are puzzled as to how to categorise, especially if, as sometimes occurs, there appear to be very few serious effects on literacy or numeracy skills. Sometimes assessors also identify weaker than average working memory as a single category of difficulty in itself, although again there may be few measurable significant impacts on literacy or numeracy. If an underlying cognitive issue such as slower than average processing speed only really has an impact during certain limited situations e.g. examinations (i.e. it has not affected aspects of literacy or numeracy acquisition or conceptual learning/ higher level thinking) it is certainly a learning *difference* (and the person concerned might need and benefit from, for example, additional time in examinations) but it might not necessarily fit the criteria for a named developmental disability.

Seen from this perspective, the identification of one or two areas of mild or relative cognitive weakness is thus likely to be a ‘normal’ phenomenon, qualitatively different from the identification of groupings of core ‘risk factors’ which tend to accumulate alongside a clear developmental history of difficulty, to form a profile of dyslexia. Assessors do need to feel more confident in concluding, where appropriate, that an individual’s overall pattern of literacy skills and abilities follows a ‘normal’ or unremarkable variation. And this confidence is increased when assessors are supported, within the institutions they work for, by the development of inclusive, needs-based practices that benefit *all* students in those institutions, alongside managers knowledgeable and assertive enough to defend the conclusions reached by assessors when challenges occur.

### Co-occurrence/comorbidity: i.e. when two or more specific issues occur for the same individual at the same time.

Increasingly there are calls to move beyond isolated diagnostic categories, into identifying behavioural profiles of co-occurring problems that shed light on the risk and resilience factors, strengths and needs of an individual experiencing, for example, persisting reading and related literacy problems. The high co-occurrence of many conditions that compromise learning is enough to threaten the assumption that their underlying causes are unrelated. Importantly, individuals with co-occurring conditions may have more severe difficulties and more complex educational needs than do other individuals and those needs may go unaddressed. The key questions here concern the practicalities of access to assessment that can cover all potential ‘bases’ as well as the very real risks to access to support if all labels (e.g. dyslexia and autism, or dyslexia with co-occurring maths difficulties), are abandoned in favour of, for example, a ‘behavioural profile’.

### The neurodiversity paradigm

The now widespread use of the terminology ‘*neurodiversity,*’ in this field may also be problematic, although at first sight it might seem to resolve some of the issues raised above. The term ‘neurodiverse’ profile is often preferred for its emphasis on respecting and celebrating difference and on identity politics, the ability of people to ‘self-define’ rather than be labelled. Yet the problem with an over-arching concept of neurodiversity is that it can be over-simplified and misrepresented to suggest that ‘everyone is on a spectrum’ of some sort. On one level ‘neurodiversity’ refers to the wide variation in human neurocognitive functioning. If we are all different then in principle, our differences should be respected and we all deserve to have those differences accommodated and supported, irrespective of how those differences manifest themselves. This is the basis upon which ‘inclusive’ practices in education and elsewhere, have been promoted as means of accommodating difference and diversity.

However on another level, the idea of ‘neurodiversity’ still represents the idea of a state of *diversity or difference from* *societal norms*.Someone who is *neurodivergent* or described as being in a *neurominority* is seen as different from someone who is ‘neurotypical’ i.e. having a style of neurocognitive functioning that falls within the dominant societal standards of “normal.” The idea of *difference* therefore remains implicit, conceptually, within the concept of neurodiversity. What this difference means is not fully resolved. The use of the term neurodiversity does not appear to take us any further into understanding or explaining to others the complex mechanisms underlying specific learning difficulties; possibly, it obfuscates these issues. Elliott (2020) suggests that the conceptualisation of dyslexia as *‘a pervasive neurodiverse disorder characterised by deficits in working memory, processing speed, attention, concentration etc. which may contrast with giftedness in other cognitive domains and aptitudes…permits a radical decoupling from literacy concerns*.’ He is concerned that it can appear possible to obtain an identification of ‘dyslexia’ without evidence of any serious literacy difficulty.

Tom Clements, writing in the Guardian (2019) about autism diagnoses, sums up a further problem with what he calls the neurodiversity paradigm:

‘*Aside from changing diagnostic practices, the general shift in advocacy in the direction of the increasingly fashionable neurodiversity paradigm has led to what I and many others see as the trivialisation of autism. Neurodiversity posits that conditions such as autism, ADHD, dyslexia and dyspraxia are not so much conditions to be treated but differences to be embraced and even celebrated. Despite the noble intentions of many of its proponents, there are those who feel that neurodiversity excludes those for whom autism confers few if any real cognitive advantages. Despite its claim to be inclusive of all “neurotypes”, its ethos inevitably means that less verbally able autistic people are marginalised from the discussion’*.

Similarly,there is a need not to trivialise the sometimes severe adverse impacts of conditions such as dyslexia for those most affected, especially during the earlier stages of schooling or if literacy is still not attained well into adulthood. While it is vital to identify ways in which interventions might be tailored around an individual’s strengths, interests and abilities, too great a focus, in assessment reports, on accentuating positive attributes and celebrating successes, can sometimes leave the impression the person assessed does not ‘really’ merit much in the way of specialist support and extra resources, because their ‘strengths’ outweigh or at least balance their ‘weaknesses’ and difficulties. This may limit and marginalise support for the most severely affected by allowing those responsible for the allocation of resources to, in effect, pay lip service to the outcomes of an assessment by withholding, delaying or limiting all but the least expensive and resource-heavy types of support.

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| From what you have read above, where do you now stand on the questions raised in the discussion? How do you approach the use of labels in your professional or academic practice?Should we continue to use labels (such as dyslexia) in assessment decision-making for reading and associated literacy difficulties? Would another label, e.g. developmental literacy difficulty, resolve some of the issues that have beset the use of the term dyslexia? If the label developmental literacy difficultyis used alongside dyslexia, how might consensus regarding this change be achieved?How important do you think it is for assessors in this field to achieve consensus regarding diagnostic labels? |

## SECTION B: SUMMARY

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| * Understanding ‘dyslexia’ as a developmental trajectory helps to focus attention on what is *specific* alongside what is *dimensional,* i.e. what mix of genetic, cognitive and environmental risk and resilience factors lead to typically presenting effects at any time-point. The label points to a range of cognitive difficulties that may be implicated in the development of literacy difficulties, as well as shared with other potential areas of learning difficulty, e.g. in mathematics difficulties, or in language disorders. In this model of risk **and** resilience, the concepts of probability and genetic diversity illustrate how multiple factors arising from the interaction of genes, the brain, cognition and environments, may accumulate to produce particular developmental trajectories which can be described as dyslexia. Caution needs to be exercised in presenting over-simplistic accounts of the potential influence of genetic, cognitive and environmental factors in explaining dyslexia.
* This model might require changes to recommended formats for diagnostic assessment, allowing for greater flexibility in test choice once the likelihood of particular trajectories has been established through diagnostic interview, the gathering of background information and baseline testing.
* A definition of dyslexia is presented and key identification criteria are outlined. Risk factors that may influence a dyslexic developmental trajectory include difficulties in phonological awareness and decoding skill, in auditory processing, in verbal short‐term memory and in rapid automatic naming. A range of environmental and health-related risk factors may also have a contributory role, e.g. visual difficulties and sensitivities, partial or temporary hearing loss etc. A resilience factor such as good verbal and oral vocabulary skills can act as a protective factor, helping to offset the impact of other cognitive and biological factors in the development of reading difficulties. While IQ/attainment discrepancy analysis in the identification of dyslexia is now largely rejected, critical questions remain about the notion and usefulness of the concept of ‘unexpectedness’ in the identification of dyslexia. This issue would benefit from further targeted research.
* Labels are sometimes rejected because developmental dyslexia is not a condition with a single clear cause and with clear boundaries. While we do not yet know enough about the precise mechanisms that give rise to the typical trajectories of dyslexia, and there is some variation in these trajectories, a common denominator in the profiles and life histories of those identified with dyslexia is persistent difficulties with literacy acquisition and fluency. A persistent and longer-term difficulty in reading fluency is most likely to be ***the*** key behavioural outcome of a dyslexic developmental trajectory, and may be accompanied by longer term problems in spelling accuracy and writing fluency, especially under timed conditions.
* In older children and adults, where underlying cognitive difficulties that influence dyslexia may also affect other aspects of learning, study and work, these will require investigation so that interventions can be tailored appropriately.
* Despite their drawbacks, labels continue to have a functional utility, acting as descriptive ‘short-cuts’ to enable conversations about factors that compromise learning and the allocation of resources to a problem. There are risks in abandoning or changing labels, particularly in resource allocation. Nevertheless, if we use labels we must interrogate the scientific criteria that underpin their use. This would be equally the case if another label, e.g. developmental literacy difficulty, or specific learning difficulty, was chosen. The concept of neurodiversity does not resolve all the problems associated with the attribution of labels, although it has great appeal to those who wish to challenge and resist the idea that any single label defines identity.
* One suggestion might be to acknowledge the use of broadly equivalentlabels, i.e. Developmental Dyslexia (DD) and Developmental Literacy Difficulty (DLTD). This would bring terminology into line with other recognised specific developmental difficulties, i.e. Developmental Coordination Disorder (DCD) and Developmental Language Disorder (DLD) and with some aspects of DSM-5 and ICD-11 revised definitions. It would also place the weight of identification in younger children around the central issue of the mechanisms surrounding the development of decoding and fluency problems in learning to read as well as other closely associated literacy issues such as spelling accuracy and writing fluency. Work would need to be done to ensure that alternative labels are accepted for Disabled Students’ Allowance applications.
* Time, and continuous lower- level assessment, such as provided in Assessment Through teaching (ATT) and Response To Intervention (RTI) frameworks, is required to ascertain whether or not literacy skill delays can be better explained by alternative, non-dyslexic developmental trajectories such as the temporary delays in the acquisition of literacy skills frequently associated with summer-born children. However, risks ‘accumulate to a diagnostic threshold’ (Snowling and Hulme 2020) and for children with persistent developmental profiles of literacy learning difficulty, there is also a need to ‘hypothesis-test’ i.e. to examine the risk, for any individual, of the potential need for longer-term support, more immediate and intensive interventions and a diagnostic label.
* For any individual, dyslexia may not always be experienced, at all points of development, as disabling, or only as disabling when appropriate interventions and support are not in place.
 |

# SECTION C: IMPLICATIONS FOR ASSESSMENT PRACTICE

## C-1 Practical implications of a risk and resilience model for assessment practice: FAQs

It is hoped that assessors, on reading this paper, will ask what, in their assessment practice, might require a re-think? The questions outlined below are not new. They arise frequently in training and professional development sessions.

1. **Which label should I use?**

This paper has argued that there are risks for access to support, interventions and resources in abandoning all descriptive labels in this field, especially when interventions depend upon the identification of a named disability or developmental difficulty.

Assessment practitioners will continue to make decisions about the use of labels based on a number of factors; the professional guidance issued by their professional bodies and associations, and external factors such organisational and institutional expectations.

Nevertheless, where it is considered appropriate to do so, it is worth discussing with the person being assessed (or parent/carer of a child) if and why a label is sought. The labels ‘dyslexia’ and ‘developmental literacy difficulty’ are of most use when it is clear that difficulties are persistent and continue to have an ongoing and demonstrable impact on managing literacy-related activities in daily life.

1. **If I am unsure whether there is sufficient evidence to support the identification of dyslexia or other developmental difficulty, can I continue to use the term ‘specific learning difficulty’ instead?**

Assessors often ask this question when confronted with a ‘tricky’ profile where there are no clear indicators of serious impact on literacy attainment but some underlying issues in, for example, processing speed and memory *are* identified.

It can help to turn this question around. In what specific ways and how seriously is the issue (e.g. a working memory or processing difficulty) affecting the person’s ability to learn, including higher-level cognitive thinking, speech and language, communication skills etc.? How are you able to assess this? What risks does the issue present to the person assessed? How might it have affected a developmental trajectory of literacy or other difficulty? Has the individual developed strategies that help mitigate its effects?

Some people are more forgetful than others. Some people read more slowly than others but nevertheless accurately. Some people are more disorganised than others. Some people have not yet been taught useful study or life skills that could help them manage their work and lives.

We are all subject to heritable, biological, cognitive and environmental risks which produce variations in a learning and cognitive profile. Cognitive factors, such as slow processing speed or difficulties in working memory, are not in themselves, specific learning difficulties, but, depending on how they manifest for any individual and how severe they appear to be, they may contribute, as risk factors, to the impact of dyslexia or other difficulty. This field remains an inexact science, so what denotes those thresholds remains a question of careful judgement on the part of the assessor.

1. **Can I use the language of ‘risk’ and ‘resilience’ in an assessment report?**

Using the language of ‘risk’ and ‘resilience’ factors, rather than ‘strengths and weaknesses’ can describe elements that may contribute, over the course of a person’s life, to a developmental and dimensional trajectory of dyslexia and co-occurring developmental profiles. Risk and resilience factors are open to change, accumulation, deterioration or enhancement: this represents a dynamic rather than the fixed conceptualisation of individual attributes, skills and experiences suggested by ‘strengths’ and ‘weaknesses’.

Using the language of risk and resilience circumvents the necessity to use the language of deficit and can be a powerful way to reflect back with the person assessed upon the specific factors in their profile which have contributed to the issues they are experiencing, and how they might be managed and ameliorated.

1. **How can I avoid promoting dyslexia myths?**

A dimensional understanding of developmental trajectories means taking care not to promote over-categorical ideas about dyslexia where there is, currently, very little evidence to support that view, e.g.:

* That people with dyslexia are ‘intrinsically’ more likely to be creative, entrepreneurial, etc. than non-dyslexics.
* That dyslexia is ‘caused’ by a single factor such as poor phonological processing, visual instabilities or working memory weaknesses.
* That there is one instructional methodology or intervention that will suit all individuals.
1. **How should I handle the issue of discrepancy and ‘spiky profiles’ in an assessment?**

Traditionally, IQ tests have been used in assessment because of the belief that the skills they test are reliable *predictors* of academic performance. ‘Spiky’ or discrepant profiles between components of these tests, e.g. between tests of processing speed and tests of verbal ability, have been viewed as indicators of dyslexia because they appear to demonstrate ‘unexpectedness.’

It is important to be aware of the limitations of IQ and ability testing. There is now a greater appreciation that traditional tests of IQ capture a relatively narrow range of skills. They do not capture creative intelligence (the ability to deal with ‘novel’ situations), practical intelligence (the ability to get things done), emotional intelligence, risk assessment skills or the ability to appreciate what you don’t know, and the ability to detect bias. People can have very low scores on traditional IQ tests and still be capable of learning a second language and a wide range of other skills. People can have very high scores on IQ tests and lack many skills and abilities.

The content of IQ testing is also changing. Newer tests, for example the IDS-2,[[24]](#footnote-24) and the WJ IV Cog IV,[[25]](#footnote-25) cover a wide range of developmental domains, although the sheer range of skills tested necessitates careful test *selection*. Unless used selectively, these assessment materials may produce almost too great a wide-angle view of the learner to be effective. Although not available for use by specialist assessors, for the assessment of children, more traditional format tests such as the WISC-V[[26]](#footnote-26) can be used in combination with other tests to provide features useful in the assessment of dyslexia. For example, the WISC V contains an Index Scale relating to naming speed, and separate tests for auditory and visual working memory.

Where multiple risk and resilience factors may accumulate to produce particular developmental trajectories which can be described as dyslexia, good verbal and non-verbal skills compared to weaker attainment skills or other weaker cognitive skills are better conceptualised as resilience factors in a profile, *not* the primary reason to identify or ‘diagnose’ dyslexia or a ‘specific learning difficulty’.

**The problem with comparing scores**

The risk and resilience model described in this paper supports assessors in considering the impact and potential importance of each separate piece of evidence, rather than trying to draw comparisons between those pieces of evidence. Traditional and often highly statistical ‘discrepancy’ comparisons are unhelpful because where multiple genetic, brain-based, cognitive and environmental factors continually interact, it is impossible, at the assessment level, to be certain about cause and effect. For example, this ‘chicken and egg’ conundrum means that, in many tests, we cannot be sure whether verbal ability scores predict, or result from weaker literacy skills.

Kahneman (2011) says that ‘to derive the most useful information from multiple sources of evidence you should always try to make those sources independent of each other.’ For example, very weak test scores for working memory *may* constitute a risk factor that could contribute to, for example, difficulties in reading and spelling accuracy, reading comprehension and writing fluency. We cannot be sure of this so the best the assessor can do is explore, with the person assessed, how those difficulties appear to manifest themselves in both literacy-based and other activities. Further observation and questioning during the assessment process can inform qualitative interpretation and reporting. The identification of working memory difficulties in a person’s developmental trajectory is therefore treated, described and explained as a potential ‘risk factor’ affecting the impact of the persistent reading or literacy difficulty, not a ‘unidirectional’ cause of that difficulty.

Similarly, if, for example, the person tested shows competent or very good verbal skills, this can be treated as a protective, resilience factor, which may, for example, have helped facilitate good reading comprehension, despite slow reading fluency.

It is important that the assessor considers and interprets each assessment result separately, looking at how the test results contribute to the accumulation of risk or resilience factors in a developmental profile.

However, where literacy skills are significantly out of line with age-expectations and with other aspects of academic achievement, this may be a useful measure of ‘unexpectedness.’

Where risk factors accumulate, this can support ‘converging evidence’ for a developmental profile of dyslexia.

1. **At what level does a risk factor point to a developmental profile of dyslexia or specific literacy difficulty?**

In assessing for specific learning difficulties, the desire for a neat and tidy statistical ‘cut-off’ (e.g. test scores at least 1SD below the mean) is understandable from a pragmatic perspective: it helps distinguish a non-typical performance from a typical or expected range of performance in a population.

Some risk factors such as family risk, or the risks represented by early childhood illnesses and/or school absence will be impossible to measure or evaluate statistically.

It is more useful to ask: at this assessment point, what factors seem to suggest a developmental trajectory for dyslexia? For example, at nine years old, weak alphabetic knowledge, lack of ability to read/decode the most common 100 words, inability to blend and segment most sounds in words, and poor reading and spelling attainment scores in relation to age-expectations, are likely to suggest worsening, not improving literacy skills. Weak scores on tests of RAN, PA, PS and /or WM [[27]](#footnote-27)could underpin the conclusions reached.

At 19 years old, the identification of dyslexia in an individual with a history of reading difficulties and late literacy acquisition who now shows reasonably good test scores for reading accuracy may be based more on below average scores for reading, spelling and writing fluency, particularly under timed conditions. The continuing impact of an underlying cognitive difficulty such as very slow processing speed or a distinct problem in working memory can be explored.

If we look again at the [DSM-5 diagnostic criteria](#DSM_criteria) for the identification of a specific learning disability, we can immediately see that *many* of these criteria are not easily measurable and are open to differential interpretation.

The identification of dyslexia, like all developmental ‘conditions’, many mental health conditions and some physical diseases and illnesses, tests the limits of scientific knowledge. Assessors, in the end, make ‘educated decisions’ based on the careful gathering together of a developmental history and the use of key and relevant tests that have the greatest potential to provide valid evidence of a developmental literacy difficulty, alongside accumulation of professional knowledge and experience gained through reading, research, reflection and assessment experience. People can accept this when it is explained honestly.

1. **What recommendations best support the model of progressive and specialisation of interventions and support for children with dyslexia / specific literacy difficulties?**

To attract appropriate resources to support the needs of learners with dyslexia, assessors do need to make it crystal clear exactly what *additional* resources and interventions will benefit children (and adults), at what stages and why.

In younger children the focus of an assessment that identifies a reading/literacy difficulty should be in exploring and identifying, in some detail, the current components of that difficulty, so that recommendations can be targeted around interventions that might address those difficulties in the light of resilience factors in the child’s profile. Establishing where there might be problems in oral and verbal skills, phonological awareness, alphabetic knowledge, letter-sound correspondence, knowledge of first key 100 words, application of phonics, and attainment levels in reading, writing and spelling can provide useful information to schools. The identification of underlying cognitive weaknesses *can* also be helpful in informing classroom practice but their impact is best explored in relation to the key problems the child currently faces, i.e. in literacy or other learning.

Interventions can be tailored around the impact and severity of the risk factors identified at any one time point but, ideally will also be monitored and adjusted over time for their efficacy. ‘Resilience factors’ will also play a part in the choice of support and intervention strategies. For example, someone with competent IT skills may more readily respond to interventions focused on assistive technologies than someone hesitant and anxious about learning a range of new IT skills.

1. **When should I use the SASC Pre and Post 16 Report Formats and the Additional Guidance?**

Currently, the SASC Pre and Post 16 Report Formats and the Additional Guidance that accompanies these documents, provide a consistent framework for the summative and differential identification of specific learning difficulties such as dyslexia. There is additional guidance for assessors carrying out assessments via remote video platform. The typical test batteries reviewed and evaluated in depth and recommended by SASC (see Test Lists in Downloads [www.sasc.org.uk](http://www.sasc.org.uk) ) have many flaws and drawbacks but used in a careful triangulation process combining evidence from a diagnostic background information interview and testimony from other allied professionals and parties, such as teachers and parents, and qualitative analysis of performance, they are the best we have at the current time.

The question of when such an assessment is best carried out should involve a discussion with the child’s parents/carers, the (older) child, or with the adult involved as to advantages and disadvantages of the application of diagnostic labels and to the future potential purposes of the assessment. There is scope for flexibility and a greater engagement of the individual (or the parents/carers of a child) in discussion and decision-making around the application of a diagnostic label such as dyslexia. Will this label have utility? Is it understood as a disability (or not)? If difficulties are addressed early and the individual is introduced successfully to a range of longer-term strategies for managing persisting difficulty, not all may see the relevance of the label. On the other hand, from a disability rights perspective, until all educational institutions and workplaces are equally inclusive and accommodating towards individuals with persistent literacy and associated difficulties, others may seek the label to ensure necessary support and accommodations where required in the future. These options must remain open.

Ideally, access to such assessments should be state-funded and built into a model of increasingly specialised assessment and intervention in schools for a core group of children for whom current support is failing to narrow the expected attainment/age gap, or who appear to have multiple difficulties that require extensive investigation.

## C-2 Assessing the impact of medical, developmental, mental health, linguistic or socio-cultural issues.

For most children and adults identified with dyslexia, there are further factors, affecting aspects of learning, which may need to be taken into account. Summative diagnostic assessment can be useful in bringing together important evidence and providing the focus for onward referral, where necessary.

The following are examples of common medical, developmental, mental health, linguistic or socio-cultural issues reported or observed as possible areas of concern during assessment sessions. These will need to be taken into account in devising recommendations for interventions and a management plan:

1. **Mental health**: low self-esteem, anxiety, depression, bi-polarity, personality disorder, schizophrenia, psychopathy, eating disorders, trauma, Post-Traumatic Stress Disorder (PTSD), Obsessive Compulsive Disorder (OCD).
2. **Co-occurring developmental conditions**: e.g. Autism Spectrum Disorder (ASD / autism, Attention Deficit Hyperactivity Disorder (ADHD), Developmental Language Disorder (DLD), Developmental Coordination Disorder (DCD), moderate learning difficulties.
3. **Physical health**: neonatal and related developmental difficulties and complications, diabetes, epilepsy, sickle cell anaemia, malarial episodes, muscular dystrophy, hypo and hyperthyroidism, hearing impairment, aural disturbances and discomforts (e.g. tinnitus), visual impairments, visual disturbances and discomforts, cerebral palsy, speech impediments, stress related disorders, e.g. skin conditions, excessive sweating, Myalgic Encephalomyelitis(ME)/Chronic Fatigue Syndrome (CFS), glandular fever, cancer/tumour, accident/trauma related brain damage, general functional deterioration, migraine, alcohol/drug use, addiction or dependence, sleep disorders, signs of physical self-neglect.
4. **Social-cultural**: EAL, bi or tri-lingualism, frequent school changes, frequent family moves, disrupted or poor education/trauma/migration, parents with health or addiction issues, school bullying and social isolation, family or personal trauma, sexual or physical abuse.

Prompt and timely referral to specialist services is key to understanding and eliciting appropriate support or treatment for a range of issues that might contribute to or interact with the literacy difficulties experienced.

Sometimes an issue is suspected to be *wholly* responsible for the presenting difficulties, and/or the presenting difficulties appear to have begun relatively recently. In this case, while it may still be useful to conduct a literacy-based assessment, no identification of dyslexia would be made until the outcome of the referral is known and can be evaluated in the light of the evidence from the assessment.

Table 1. Referrals to specialist services.

|  |  |
| --- | --- |
| **Referral to standard medical, therapeutic, audiological or optometry services** to investigate potential reasons for presenting difficulties, e.g. with vision, hearing, speech, motor coordination and language, and a range of medical and mental health conditions.  | **EXAMPLE:** a nine year old child, at assessment, is identified with persistent phonological processing difficulties. One very noticeable aspect of her presenting difficulties is in distinguishing between vowel sounds and in articulating consonants. She is referred to an audiologist to check her hearing and to a speech and language therapist for further investigation and remediation of her auditory discrimination and articulation difficulties.**EXAMPLE:** a student reports severe headaches and sensitivity to light, interfering with their ability to read. They are referred to an optometrist for a standard sight-test, where an examination of the internal structures of the eye test suggests the presence of a tumour. Onward referral from the optometrist to a hospital specialist identifies a benign tumour, which is successfully treated. There is no history of developmental reading difficulties and the identification of dyslexia is ruled out, although the impact of the tumour on the student’s general health is kept under review at the hospital.**EXAMPLE:** at assessment, a teenage boy shows no signs of reading or spelling difficulties but describes how he finds it almost impossible to proceed in a piece of writing if his handwriting does not appear on the page in the way he intends it to. He mentions that he has, for quite some time, tended to use certain repetitive behaviours. He finds it necessary to line things up neatly, to eat his food in an unvarying order, and feels anxious if he thinks he is being observed in these behaviours. His parents also report that their son has used repetitive and ritualised behaviours since childhood. Very few people outside the family have been aware of these behaviours because the boy has concealed them. At a discussion with the parent and boy, routes to further referral via a G.P. are discussed and advice is given about seeking some help and support for understanding and managing these behaviours.  |
| **Referral to specialist optometry or audiology services** | **EXAMPLE:** At assessment, a 10 year old boy, who has had a recent eye-test, with no identified problems, reports that, when reading, words always look blurry and fuzzy and that words and sections of text tend to move around on the page. His parents have heard that coloured lenses/overlays could be helpful for some children with reading difficulties. It is explained that the current evidence for the efficacy of these interventions is highly controversial but that a referral to a qualified vision professional such as a specialist optometry service could investigate potential visual sensitivities and disturbances. A referral letter is written and it is explained to the parent that, at present, these services are likely to incur charges, although a referral via an optometrist to an NHS eye clinic might also be a route to specialist assessment.  |
| **Multi-agency referral for further investigation of suspected co-occurring difficulties** e.g. for DLD, DCD, ADHD, autism  | **EXAMPLE:** A 19 year old student reports the following difficulties: * Problems in self-organisation and management
* Strong preference for structured regimes
* Tendency towards perfectionism
* Strong preference for very specific interests
* Severe anxiety in social situations
* High levels of sensory sensitivity

 She has reached a point where the combination of these traits interferes with her studies and her life and is causing her considerable distress. She feels she could be autistic and (alongside other information and guidance) is advised to explore, via a referral from her G.P., the possibility of an assessment for high functioning autism.  |
| **Referral for additional English language support** for learners with co-occurring difficulties arising from EAL or a complex linguistic history. | **EXAMPLE:** an overseas student in higher education, has been identified as having dyslexia in his home country and is struggling with the reading and writing requirements of his UK course. Acquiring language fluency in a second language is usually estimated to take around seven years (of immersion in that language) and the student is still on that path to complete fluency. He is advised to:* At his university, access the courses for EAL learners in English for Academic Purposes, and/or short courses in informal conversation skills.
* Consider using an online pronunciation resource such as forvo.com <https://forvo.com/languages/en/>
* Consider seeking out 1:1 specialist English language teaching that can help him understand and focus on strategies for overcoming the typical patterns of errors in phonology, orthography, grammar and syntax made by speakers of his first language when learning English.
* Discuss with his academic tutor how his difficulties in reading and spelling fluency, and in processing speed mean that certain teaching strategies are likely to be helpful: e.g.
1. A **metacognitive** approach: i.e. thinking about and understanding language structure.
2. **Analogous reading / spelling** i.e. learning words which fit into families (to minimise the need for new learning) e.g. *bright, sight, might, light*.
3. **Modelling:** reading along with a tutor or peer - helps the student gain confidence.
4. **Training in auditory discrimination / phonological awareness:** Learning to identify specific sounds within words.
5. **Memory training:** exploring specific memory techniques such as mnemonics.
6. **Overlearning:** Repetition and revision.
 |
| **Advice on referral to specialist school** | **EXAMPLE:** a ten year old child with very severe dyslexia and co-occurring ADHD has virtually no functional reading skills and will be unable to access much of the curriculum on transfer to secondary school. The child’s behaviours (impulsivity, difficulty staying on tasks, answering out of turn) have worsened, and interventions to date have not been successful. The child is very unhappy and isolated at school and often refuses to attend. The parents are considering applying for a residential placement at a specialist 9-13 years boarding school for students with dyslexia and advice is given on the routes to and pros and cons of securing such a placement.  |

**SECTION C: SUMMARY**

|  |
| --- |
| * The pragmatic implications of this paper for assessment practice are explored in **FAQs**, covering labelling, the language of ‘risk’ and resilience’, discrepancy analysis, risk accumulation and thresholds for identification, interventions, and the use of the SASC Report Formats.
* Common medical, developmental, mental health, linguistic or socio-cultural issues reported or observed as possible areas of concern during assessment sessions, which may also need to be taken into account, are described. Examples are given of where onward referral to other specialist services may be required.
 |

# SECTION D: CONTEXT AND POLICY

## D-1 Introduction

This section covers the broader context of literacy difficulties in the UK, and the key political, structural and economic factors that influence access to assessment, intervention and support for children and adults. Issues of social justice, fairness and equity in the allocation of resources are discussed. There is a particular focus on the implications of the current special educational needs and disability SEND Code of Practice[[28]](#footnote-28) and the ‘Graduated Approach’ for the effective identification of dyslexia at school level. [**Key recommendations**](#_10_Key_Recommendations)are made at the end of this section for assessment practices that successfully identify and support the significant proportion of children in UK schools who experience reading and associated literacy difficulties, including those with dyslexia. Finally, current issues regarding access to assessment for dyslexia in higher education, in the workplace and in the young offender and prison sectors are also considered.

## D-2 Who struggles with literacy acquisition in the UK?

Significant numbers of children and adults in the UK struggle to read, spell and write fluently and require effective assessment and intervention. Three sets of statistics illustrate the current landscape of difficulty in literacy skill attainment in the UK:[[29]](#footnote-29)

In England, in **2020,** 27% of 10 to 11 year olds did not meet the expected standard in reading in the 2018 to 2019 school year. Only 27% of 10 to 11 year old pupils met the higher standard. A significant number of 11 year olds in the UK (12% according to Allen 2018, Allen, R. (2018) or 200,000 pupils according to a government statement in April 2021) leave primary school unable to read sufficiently to access the secondary curriculum.

In **2019**, in England, 28.5% of students entered for English Language GCSE were awarded Grades 1, 2 and 3, (i.e. below the ‘pass’ grade 4).

1 in 6 (16.4% / 7.1 million people) adults in [England](http://www.oecd.org/education/skills-beyond-school/building-skills-for-all-review-of-england.pdf) have very poor literacy skills.

1 in 4 (26.7% / 931,000 people) adults in [Scotland](http://www.gov.scot/Resource/Doc/319174/0102005.pdf) experience challenges due to their lack of literacy skills.

1 in 8 (12% / 216,000 people) adults in [Wales](https://gov.wales/sites/default/files/statistics-and-research/2019-01/national-survey-of-adult-skills-in-wales-2010.pdf) lack basic literacy skills.

1 in 5 (17.9% / 256,000 people) adults in [Northern Ireland](http://www.oecd.org/skills/piaac/) have very poor literacy skills.

A complex set of factors can, in varying combinations, play a role in why children and adults continue to struggle with aspects of reading (and associated literacy skill attainments such as spelling proficiency and writing accuracy and fluency), despite ‘typical’ schooling and instruction.

Table 2 outlines a number of key factors affecting literacy acquisition:

|  |  |
| --- | --- |
| **INDIVIDUAL, HEALTH AND FAMILY*** Developmental delays in early childhood
* Family stress and functioning
* Oral language skills and linguistic history
* Developmental difficulties, e.g. in memory, executive function, processing speed, speech and language.
* Health conditions and disability
* Motivation, attitudes and perception of self
* Gender and ethnicity
* Inequalities in school preparedness
 | **THE PHYSICAL AND SOCIAL ENVIRONMENT*** Poverty and material deprivation
* The home learning and linguistic environment
* Child-rearing strategies
* Community disadvantage
* Differential access to high quality early years education
* Trauma, neglect, specific stressors and life events
* Mobility, migration and residential transitions
 |
| **SCHOOL*** Differential school practices, variations in teaching quality and pedagogy
* Unconscious teacher bias
* Access to assessment
* Attainment and ability grouping
* Curriculum practices
 | **NOVEL FACTORS*** The COVID 19 pandemic from March 2020
* The increasing dominance of computer technologies in communication, learning and socialisation
 |

Table 2. Literacy difficulty: contributory factors

*Some combinations* of these factors will, for many struggling readers, be the principal reasons they experience difficulty with literacy acquisition, as these factors can be linked with early oral language development, and / or the motivation and the opportunity to read, (Breadmore et al., 2019). Schools alone cannot compensate for all material and socio-economic factors that may affect learning and reading readiness in young children, without major structural changes to school budgets, early years’ services and measures to reduce poverty, poor housing and reliance on foodbanks. 31%, nearly a third, of children in the UK now live in poverty (Joseph Rowntree Foundation, UK Poverty 2022).

What further factors influence the acquisition of literacy?

## D-3 Trajectories of typical and non-typical reading development in an alphabetic orthography – English

Literacy acquisition, especially in an opaque orthography such as English, is a long and complex task. Unlike the development of oral language, which invariably emerges given a suitably language-rich environment, literacy requires features of heritable traits *and* learned skills, and very few children develop literacy with little or no explicit teaching (Castles *et al*, 2018, p 8). Literacy is a relatively recent human development and piggybacks on other abilities which evolved to address quite different tasks (Dehaene, 2009).

Since the start of universal primary education (broadly, the later C19), cases began to emerge of children for whom the acquisition of literacy proved unexpectedly and at times intractably problematic (Kirby *et al*, 2020). This difficulty has gone by a variety of names over the years, of which the most persistent and still widely accepted in the UK, if imperfectly understood, is dyslexia (Kirby, 2019; Kirby, 2020; Vellutino et al*.,* 2004).

In 2020 the number of children attending state-funded schools in England was **7,778,000[[30]](#footnote-30)**. The number of children receiving SEN support in 2020/21 **identified with a specific learning difficulty** was 145,187, i.e. 1.8% of all children in state-funded schools in England. However, the criteria used for identification are unknown. The overall number is not further broken down into type of SpLD, so precise numbers of children with *dyslexia* in state schools in England is also not known. The table below illustrates, for comparative purposes, figures for type of need for SEN support in other categories in English schools.

### Type of need for SEN Support in Schools in England between 2015/16 and 2020/21.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **2015/16** | **2016/17** | **2017/18** | **2018/19** | **2019/20** | **2020/21** |
| **Autistic Spectrum Disorder** | 43,327 | 48,200 | 54,269 | 60,048 | 67,867 | 70,474 |
| **Hearing Impairment** | 14,654 | 15,302 | 15,985 | 16,591 | 17,173 | 17,067 |
| **Moderate Learning Difficulty** | 244,539 | 231,796 | 224,910 | 218,501 | 211,563 | 203,454 |
| **Multi- Sensory Impairment** | 1,692 | 2,053 | 2,286 | 2,473 | 2,647 | 2,808 |
| **Other Difficulty/Disability** | 50,413 | 49,080 | 47,695 | 46,393 | 45,932 | 44,592 |
| **Physical Disability** | 20,212 | 21,211 | 22,256 | 22,852 | 23,417 | 22,944 |
| **Profound & Multiple Learning Difficulty** | 1,012 | 1,039 | 1,001 | 975 | 916 | 825 |
| **SEN support but no specialist assessment of type of need** | 36,385 | 41,437 | 39,272 | 40,246 | 40,333 | 42,204 |
| **Severe Learning Difficulty** | 3,381 | 3,322 | 3,297 | 3,118 | 3,001 | 2,634 |
| **Social, Emotional and Mental Health** | 166,347 | 167,670 | 173,115 | 181,944 | 194,111 | 195,294 |
| **Specific Learning Difficulty** | 142,550 | 138,876 | 139,907 | 142,559 | 145,878 | 145,187 |
| **Speech, Language and Communication needs** | 194,200 | 205,643 | 216,679 | 227,756 | 236,960 | 245,232 |
| **Visual Impairment** | 8,325 | 8,719 | 9,078 | 9,384 | 9,622 | 9,727 |
| **Total** | 927,037 | 934,348 | 949,750 | 972,841 | 999,420 | 1,002,442 |

Table 3. Type of need for SEN Support in Schools in England between 2015/16 and 2020/21. [DfE figures 2021.](https://explore-education-statistics.service.gov.uk/find-statistics/special-educational-needs-in-england) (Extrapolated from data tables. Categories are those used by the DfE).

Of interest to this discussion is the number of children, highlighted above, who receive SEN support but have had no *specialist* assessment of type of need. What other types of assessment, if any, may these children have received?

Where children have good oral vocabulary skills, access to normal teaching and instruction, and plenty of opportunity to read, but nevertheless experience significant and persisting decoding difficulties, read inaccurately and hesitantly, and experience longer-term, associated difficulties with spelling accuracy and writing fluency, what might account for these difficulties?

How useful are the categories used by the DfE for the classification of need in Table 3 above?

## D-4 What influences non-typical reading development?

### Multifactorial heritable, biological, and cognitive risk factors.

Dyslexia has long been considered to arise from a phonological ‘deficit’, although such a deficit is neither necessary nor sufficient to explain the variability of the condition and there is now an emerging consensus that it is a multifactorial condition (Snowling and Hulme, 2020). Children’s reading problems are best represented by a multiple riskmodel, with overlap and co-occurrence between distinct but heterogeneous disorders of learning. Approximately 40% of children with one neurodevelopmental disorder will meet the criteria for having another neurodevelopmental disorder. Therefore, where dyslexia co-occurs with maths related disorders /dyscalculia / ADHD / Developmental Language Disorder (DLD) or Developmental Coordination Disorder (DCD), there will be combinations of shared and non-shared cognitive risk factors (Muter, 2021).

**English as a complex alphabetic orthography**

In alphabetic orthographies (writing systems) letters (or letter pair/groups) represent speech sounds i.e. individual sounds (phonemes) known as consonants or vowels. In English, the same sound can be represented by a range of different graphemes e.g. **a** (b**a**by), **ai** (r**ai**n), **ay** (pl**ay**), **a-e** (l**a**n**e**), **eigh** (**eigh**t). One grapheme, e.g. **ow**, can be pronounced differently in different words (c**ow**, l**ow**).

English is one of the least consistent, or ‘deeper’ alphabetic orthographies, with complex sound–symbol and syllabic/morphemic structures. Despite this, it is important not to over-emphasise the irregularity of English. There is more consistency than is sometimes recognised. For example, the vowel in *wash* appears unusual compared with *stash, dash and cash* but it is shared with other words beginning with the letter w like *want and wand* (Castles, Rastle and Nation, 2018).

Nevertheless, the complexity of the English language may explain, in part, the apparent higher overall incidence of non-typical or dyslexic developmental trajectories in English language learners compared to learners in non-alphabetic writing systems. This could be attributable to the multifaceted interaction between heritable factors (i.e. biologically based precursors of reading skill) and the structure of the English language. Amongst alphabetic writing systems, if *reading fluency* is a key marker of severity, then one would expect similar level of difficulty across all alphabetic languages, even if those difficulties became more evident later in shallower alphabetic orthographies.

### The developmental stages of learning to read.

Learning to read exerts a reciprocal influence on cognitive abilities (Snowling, 2020). The age range 4-9 years is an absolutely critical period for literacy learning. Learning to read involves specific components and skills (see [Table 4](#Table_4)). Developing and acquiring these components of reading skill at the expected age tends to drive positive orientations to reading and, very likely, to learning in general; these children step onto an ‘up’ escalator.

For children who do not begin to learn to read at the expected age, and who do not consolidate learning at each developmental stage of learning to read, the risk of a reverse motivational trajectory (a ‘down’ escalator) is high. In Table 4 below, the key developmental steps in learning to read for typical learners are outlined, alongside the developmental difficulties which can accrue in dyslexic learners and set a child off along a very different pathway. This model facilitates understanding of why decoding can require so much more effort in dyslexic learners and inhibits the reciprocal ‘self-teaching’ process that occurs for typically developing readers (and helps accelerate their progress and attainment).

Table 4

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| **TYPICAL LEARNERS** | **LEARNERS WITH DYSLEXIA** | **POOR COMPREHENDER PROFILE**(Deficits in language contribute to problems with reading comprehension). |
| **4YRS – 6/7YRS:****Crack** the alphabetic code**Make** good progress on letter-knowledge and symbol-sound mapping (‘phonological linkage’) – although, in English, this can take longer than in ‘shallower’ orthographies such as Italian or Finnish. **Begin** to acquire whole (sight) word recognition.**Learn** how to ‘decode’ i.e. translate a word’s spelling to its sound and then to its meaning.**Embark** on a two way interactive process between phonological skills and learning to read. Phonological awareness promotes reading development, but reading also helps develop phonological skills (Muter, 2021, p25).**Acquire** segmentation skills, which drive early reading development. Verbally able children find this easier than those with low vocabulary levels.**Are likely to** acquire positive attitudes to their reading experiences. | **4YRS – 6/7YRS:****Show** early signs of difficulty in acquiring alphabetic knowledge and phonological awareness. Have particular difficulty in decoding new and unfamiliar words, and in spelling. This can occur despite having good oral vocabulary and other verbal and/or non-verbal conceptual skills.**Show** weak phonological and/or visual processing skills. The causal basis of dyslexia appears to be most strongly related to these problems. **May show** weak phonological memory skills.**Are likely to show** weaknesses in rapid automatised naming speed. **Show** slow response to intervention.**Can begin to** acquire negative attitudes to their reading, spelling and writing experiences.  | **4YRS – 6/7YRS:****May show** early signs of Developmental Language Disorder (DLD), where language *and* literacy skills are affected. May show weak phonological processing skills (phonological awareness and verbal memory), in the context of poor language skills, which include vocabulary/grammar difficulties, auditory processing deficits, executive problems and motor weaknesses.**May develop** hyperlexia, i.e. – strong decoding skills with delayed comprehension. |
| **FROM 7YRS** **Begin** to ‘self-teach’ i.e. gradually acquire further orthographic knowledge that builds on the decoding skills learned. Learners abstract the spelling-sound correspondence rules implicitly and hence build orthographic knowledge. Familiar words are recognised more rapidly and automatically and spellings mapped to meanings without recourse to decoding. **Decrease** their reliance on a decoding strategy, although even adults with no reading difficulties may occasionally need to read unfamiliar words more slowly while recognising most others rapidly and efficiently. **Improve** word recognition through use of analogy and generalisation, lexical frequency and word imageability, alongside growing awareness of morphemic and grammatical construction. **Develop** higher order reading skills, including comprehension**,** dependent on: * oral language and vocabulary knowledge
* verbal working memory
* efficient visual / phonological processing
* print exposure
* motivation

**Develop** listening comprehension skills that play an increasingly important role in reading for meaning and in reading comprehension. | **FROM 7YRS** **Demonstrate** poorly specified phoneme representations that prevent the development of complete and secure orthographic mappings between phonemes and their corresponding letters and letter strings and inhibit the ‘typical’ move away from reliance on a decoding strategy. *Non-word reading tasks* tap into these difficulties. **Rely on** a decoding strategy much longer than typical learners. **Experience** significant, persisting struggles with reading, writing and spelling, the basis of which lies in multiple, interacting factors (e.g. phonological and/or visual processing deficits, but may also include features of other co-occurring developmental difficulties, such as motor, attentional, language or social and communication difficulties). There can be secondary impacts on self-esteem and confidence and, in some children, the development of reading-avoidance. **Can,** in many cases, respond to specific, targeted interventions, that narrow an age-achievement reading ‘gap’. Some children with severe underlying deficits, additional co-occurring difficulties (which may have been unrecognised or addressed) and, in some cases, fewer cognitive resources to offset the difficulties, can become increasingly disengaged and troubled. **May** continue toread slowly and to read and spell very inaccurately. **May**, if they have good verbal and oral language skills, show few problems with listening comprehension and few problems with reading comprehension, unless under timed pressure or reading speed is exceptionally slow. | **FROM 7YRS** **Can continue to present** with a wide range of oral language difficulties, evident from a very young age, which impede reading comprehension and educational progress and attainment. **Can show** persisting language deficits, deficits in executive function and motor skills. *Phonological deficits* decrease over time, unless DLD co-occurs with dyslexia (Snowling et al, 2019). Children and adults originally identified with dyslexia may also turn out to have oral language skills that are weak enough to qualify for the diagnosis of DLD.  |

Table 4. Key developmental stages in learning to read in an alphabetic orthography. Typical and non-typical developmental trajectories.

### The ‘right’ form of reading instruction

Methodologies of reading instruction in UK schools have been subject to ‘reading wars’. There has been a conflict between the teaching of phonics (where the sounds that letters make are taught explicitly) and a ‘real books’ approach to teaching reading (where a child ‘discovers’ meaning in a language-rich environment) using graphic, semantic and syntactic knowledge to guess the meaning of a printed word). Solity (2020) argues that there are two key barriers to ending the reading wars: the ways in which systematic synthetic phonics is taught and the role of phonically decodable texts in reading schemes. Phonics is accepted as the most effective form of reading instruction. However, whether this needs to be taught in isolation or in the context of rich language seems to be at stake.

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| Is it possible, with the ‘right’ form of instruction, to teach *all* children to read fluently and accurately, whatever heritable or biological traits they bring to the process of learning to read, and irrespective of the complexity of the English language? |

## D-5 Lessons from reading research: how is reading best taught?

One of the many problems and issues in making sense of the very wide field of reading research is in distinguishing between reading science that develops theoretical and pedagogical approaches to teaching literacy skills based on research into *typically-developing readers,* and theoretical and pedagogical approaches that are based on research with children *at risk of or identified with a reading or other learning disability/dyslexia*.

For example, there have been three recent and important reviews of the science of reading development, all of which address the long-standing ‘reading wars’ about the best methods for teaching children to read; Castles, Rastle and Nation, (2018), Solity (2020) and Wyse and Bradbury, (2022). None of these studies claim to review research into how to teach reading to children at risk of or identified with persistent literacy difficulties or dyslexia.

Castles, Rastle and Nation state that the ‘*extensive and important body of work on the complex needs of children with various kinds of learning difficulties is beyond our scope.*’ Solity’s work is based on a computer analysis of the most commonly occurring grapheme- phoneme-combinations (GPCs) and whole words in children’s reading books, making a theoretical case for why some mappings should be introduced early, some later and some potentially not at all. In their study, Wyse and Bradbury (2022) argue that the teaching of phonics and reading in curriculum policy and practice should more closely reflect the evidence that *contextualised teaching of reading*, or *balanced instruction*, is the most effective way to teach reading, but they base their research on typically developing children in a systematic qualitative meta-synthesis of 55 experimental trials that included longitudinal designs, alongside a survey of 2205 teachers.

Solity (2020) argues that teaching a combination of the 64 most common letter-sound mappings together with the 100 or so highest frequency words, would allow children to read 90% of the words in texts they typically encounter. Other important elements of this approach include being taught to correct errors in the pronunciations of ‘sight’ or irregular words, and the use of real books (i.e. not decodable books) for reading practice.

In terms of instructional methodology, Solity recommends the following approaches:

* Daily spelling and frequent group and individual reading with children, with lower achieving children getting 3 additional short practices per day.
* Children taught one skill at a time.
* Sequenced skills taught according to their difficulty.
* Child presented with tasks that have only one interpretation.
* Teaching focused on a small number of generalizable skills.

There *are* likely to be pedagogical approaches to teaching reading, with elements of the one outlined by Solity, that, in theory, could support most children, including many non-typically developing readers. Specialist teachers have long been saying that ‘dyslexia-friendly’ approaches can benefit most if not *all* learners.

It *is* likely that students with dyslexia could thrive in ‘balanced instruction’ type programmes for alphabetic writing systems like English, but, crucially, these programmes need to be informed by a ‘deep understanding of how reading develops’ (Castles, Rastle and Nation, 2018). Castles, Rastle and Nation argue that,

‘*The guiding principle here would be that although there are many different aspects of reading that must be learned—alphabetic decoding, fluent word reading, text comprehension—this does not mean that instructional time should be devoted equally to all of them at all points in reading acquisition. Rather, instructional regimens to support these various abilities are likely to be most effective at particular points in development, and limited teaching time should be structured to reflect this****.*** *For example, detailed instruction in morphological regularities or strategies for text comprehension is unlikely to produce maximum benefits before children have mastered basic alphabetic decoding skills.’* P39.

The key characteristics of a ‘best-practice’ approach to teaching literacy, as advocated in the articles described above, do embody (but also refine) many of the teaching approaches long recommended for children with dyslexia. These include:

* An early-years focus on oral language enrichment (absolutely essential as a foundation for the development of decoding skills).
* Direct instruction to crack the alphabetic code, teaching blending and segmentation skills.
* The provision of systematic phonics instruction.
* Paired reading or reading with a teacher or teaching assistant, to encourage motivation and enjoyment of texts.

**Important to note:**

It is precisely the issue of **timing** and **readiness** that is so crucial to effective interventions. Wyse and Bradbury (2022) suggest that there is evidence that neglect of this factor may even *create* learning difficulties in literacy acquisition. What problems have been identified?

* The entry point (four years old) and pace of nationally-delivered programmes of systematic synthetic phonics often outstrips the abilities of learners to consolidate their skills.
* The introduction of target based assessment points such as the Phonics Screening Check creates pressure to use a single methodology of reading instruction.
* That oral language skills need to have developed sufficiently to make the best use of phonics instruction.

Instructional programmes for reading also need to cater for the impact of co-occurring cognitive and other developmental problems, e.g. motor, language, attentional or sensory difficulties. Children may need different levels and types of support at different points. The use of ‘real books’ (rather than graded phonics ‘readers’) both to motivate children and to assess their ability to manage ‘real-world’ reading, is controversial for those with severe decoding difficulties, who may continue to need the ‘scaffolding’ and overlearning function of phonics based texts for longer than usual. Alongside reading, literacy acquisition also involves learning to spell and write, and these skills require additional abilities, such as fine motor skills, greater accuracy and specificity, and skills in planning, in goal maintenance and in working memory.

Valerie Muter, in her book, ‘Understanding and Supporting Children with Literacy Difficulties’ (2021) reviews theoretical and pedagogical approaches to learning to read that are based both on typically-developing children, and on research with children at risk of or identified with a reading or other learning disability/dyslexia. She provides a comprehensive summary of interventions that are specific to the literacy challenges experienced by children with dyslexia, including those with accompanying language delay or disorder, addressing the question of what additional approaches /resources might be required for children who have dyslexia.

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| Do we know enough abouthow non-typical developmental trajectories affect literacy learning? |

## D-6 The SEN Code of Practice and the Graduated Approach.

In theory at least, there *are* staged and graduated systems in place in schools in the UK that should cater for children requiring more intensive support. At present these systems are not always working as well as they should. Why are they failing?

Education in the UK is a devolved area, with each nation taking a different approach (Institute for Government, 2021). Some aspects of the discussion in this Section of the paper will therefore not apply or apply in a slightly different way in some of the administrations. Scotland is an important case in point. Responsibility for Scottish education is devolved to the Scottish Parliament. The educational system in Scotland differs in many respects from that found in the remainder of the UK. While much of what is contained in other sections of this paper, particularly the research, is relevant to the Scottish context, issues relating to legislation, pedagogy and examinations differ significantly from that found in the rest of the UK. Please see [**APPENDIX 2**](#Appendix_2) for more information.

However, there is universal acceptance of the importance of teaching accurate and fluent reading and writing skills as one of the most crucial elements of education, in particular primary education (DCSF & Rose, 2006; Castles et al, 2018; DYT, 2013). Since the late 2000s there has been a statutory duty on schools to include high-quality systematic phonics training in the teaching of early reading, as this has been shown to be the most effective aid to cracking the alphabetic code for the vast majority of children (DCSF & Rose, 2006; Stuart *et al*, 2008). Over time, the mandating of systematic synthetic phonics has become even more enshrined and has led to the introduction of the Phonics Screening Check (see Duff et al, 2015). In the same time period there has also been a duty on schools to provide support for children with special educational needs (SEN) (DCSF & Rose, 2006; DfE, 2015), originally through the oversight of a coordinating teacher (SENCO); however, it has been emphasised, both through the revised SEN Code of Practice (DfE, 2015)[[31]](#footnote-31) and the Teachers’ Standards (DfE, 2012), that all teachers are teachers of children with SEN and that teachers have explicit accountability for the progress of all children in their classes.

This is encapsulated in the Graduated Approach: Assess; Plan; Do; Review (Fig 4.)



Figure 4: The Graduated Approach to SEN (Packer, 2017)[[32]](#footnote-32)

There are currently **two levels of support in schools in England** for children identified as requiring additional support: a **lower level** (school support, assessed and provided for by schools) and a **higher level** (plans conveying legal rights to support, assessed and partly funded by Local Authorities - LAs). Where it works well, the Graduated Approach model can be effective. However, this staged system for identifying and addressing more complex and persisting literacy and /or numeracy difficulties within the SEND Code of Practice, is in urgent need of review.

While the implications of the revised SEN Code of Practice (2015) were widely welcomed, they were subject both to funding constraints and also to the fragmentation following the Education Act (2011) which dismantled a large amount of the post-war education settlement and promoted the formation of academy trusts, in addition to side-lining the progress made following the Rose Review (DCSF & Rose, 2006) and Report (DCSF & Rose, 2009) in training and placing specialist teachers in every school (DYT, 2013, 2020). Each local authority or academy trust was enabled to take its own approach to the ‘local offer’ for SEND (Gray and Norwich, 2014) and the range of approaches is now very varied, including strict Response to Intervention (RTI) protocols, semi-private contracted specialist assessment services and specialist teaching teams employed by local authorities. See **D-11** below.

Historical, political, economic and structural policies to encourage fragmentation of school type and governance, alongside the centralisation of control over the school curriculum, and school-based testing and school budgets, has therefore had an ongoing impact on the allocation and funding of support for special educational needs and disabilities (SEND). As a result, in schools and colleges, the current structuring and resourcing of support for special educational needs and disabilities (SEND), despite much very good practice in certain areas, remains ineffective in raising overall attainment levels of children and young adults who struggle to acquire literacy skills.

A recent review of SEND provision carried out by the Education Policy Institute (Hutchinson 2021) written in response to a long standing concern that children’s needs at either the lower or higher level are not fairly and systematically assessed, concluded that:

* There is a postcode lottery in access to SEND support, both for identification at lower level (school support, assessed and provided for by schools) and at higher level (plans conveying legal rights to support, assessed and partly funded by Local Authorities).
* The primary school attended by the child makes more difference to a child’s chances of being identified with SEND at lower or higher level than anything about them as an individual, their experiences, or which LA they live in. This represents an inconsistent assessment system, not well adapted to children’s individual needs.
* School assessments focus mostly on language, communication and literacy needs: Local Authority assessments focus mostly on personal, social, and emotional development.
* Academy schools represent lower chances of being identified with SEND i.e. under-identification.
* The least disadvantaged children in the most disadvantaged neighbourhoods have the highest chances of being identified with SEND. The better off in these areas capture resources.
* Attending a school in an area with high levels of disadvantage = less chance of being identified with SEND than children of similar backgrounds in affluent areas, suggesting rationing of support and higher thresholds for identification.
* Educational or residential transitions reduce and delay access to SEND support. The system is not adapted to the lives of children. Where there is ‘uninterrupted visibility’ i.e. regular school attendance, this is an important factor in the likelihood of securing SEND support.

To summarise, interpretation and implementation of the SEN Code of Practice varies considerably, seems heavily influenced by resource allocation issues, which are not adequately ring-fenced, and is inconsistent. The Hutchinson report highlights that identification and assessment for SEND has been a ’*postcode lottery*’ and thus open to error across the whole spectrum of SEND need.

Other reports have made similar points: The Lamb Inquiry (2009) and the Ofsted Report (2010) also drew attention to inconsistencies. Ofsted’s reflections on the implementation of the SEND reforms (Ofsted 2017, 2021b) make the point that; ‘*Our ‘Supporting SEND’ report noted that some of the pupils included in the case studies had not had their needs accurately identified until later in their primary education or even until they reached secondary school*’ (Ofsted 2021b) and that ‘*There were also issues such as: Inconsistencies in the identification of children and young people’s needs*’ (Ofsted 2021a).

An external pressure, the requirement for schools to demonstrate ‘value-added’ achievement at transition points, e.g. from primary to secondary, can lead to a sudden spurt of testing of children aged 10-11 years. Resulting reports can be negative in tone, and are not necessarily geared towards the available/required support at secondary level. In too many cases, assessment is delayed and diagnostic conclusions are required *before* any interventions at all are put in place. All this underlines the importance of ensuring that the identification of specific learning and literacy difficulties such as dyslexia is timely and accurate, and that it is then followed up by the right support. For many children, more specialist levels of assessment and intervention come too late.

If you work in or closely with schools, what is your experience of the Graduated Approach for supporting children with persistent literacy difficulties? What happens if children ‘fail’ the Phonics Test in KS1?

Is the dyslexia label effective in raising levels of literacy and associated academic attainment? Does it attract additional levels of support?

## D-7 Specific Learning Difficulties and Education, Health and Care Plans (EHCPs)

In 2014 the Children and Families Act increased the range of ages of children and young people with SEND that Local Authorities had to support, extending this to 25 years old. Education, Health and Care plans (EHC plans), are allocated to those with the higher levels of need. Not all ECH plans are related either in part or in whole to reading or other literacy needs. However, figures published in 2021[[33]](#footnote-33) showed that the number of EHC plans being issued is increasing. The statistics, [published by the DfE](https://www.gov.uk/government/statistics/statements-of-sen-and-ehc-plans-england-2019), show there were 354,000 children and young people with an EHC plan in January 2019 – an increase of 34,200 (11 per cent) from the combined total of children with EHC plans or statements of SEN in January 2018. In line with these figures, there have been recent small increases in the proportion of children with specific learning difficulties securing EHCPs (7.1% in 2020/21, compared to 6.3% in 2019/20 and 5.9% in 2015/16).

While 1.4 million pupils in English schools alone have an identified special educational need (SEN), at the Higher Level of SEND support, children with identified specific learning difficulties form only a small percentage of all SEN Tribunal Appeals[[34]](#footnote-34). In 2019-2020 they numbered 562 out of a total number of 7917 appeals. In 2020/2021, the number of children with Specific Learning Difficulties who have EHC plans, as a proportion of the total number of children with ECH plans in that SEND category, is the lowest of any of the major SEND groups, at 7.4% -see Table 5 below. Another way of putting this is that it is harder to get an EHC plan for a Specific Learning Difficulty than any other SEND category.

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| SEND Category | SEN Support | EHCP | As a proportion of total number of children with EHCPs in that SEND category |
| Speech, Language and Communication Needs | 245,232 | 49,530 | 16.8% |
| Moderate Learning Difficulty | 203,454 | 31,159 | 13.28% |
| Social, Emotional and Mental Health | 195,294 | 45,191 | 18.79% |
| Specific Learning Difficulty | 145,187 | 11,610 |  7.4% |

Table 5. Proportion of ECHPs in each SEND category 2020/1 [DfE figures 2021.](https://explore-education-statistics.service.gov.uk/find-statistics/special-educational-needs-in-england) (Extrapolated from data tables)

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| How helpful are the categorisations used by the DfE in understanding co-occurrence of developmental difficulties?  |

In March 2022, the government finally published its review of SEND provision as a Green Paper. The review was announced in 2020 by the education secretary at the time, Gavin Williamson. There has also been a major report into SEND carried out by the Commons Education Select Committee[[35]](#footnote-35), which has made a number of recommendations about the EHC process.

The report, produced by MPs in 2020, called for the Department for Education to create a clear and standard process for assessing the need for and producing EHC plans. It said this would reduce paperwork and simplify the process for all involved. The report suggests that the 2014 reforms

‘*were the right ones. But their implementation has been badly hampered by poor administration and a challenging funding environment in which local authorities and schools have lacked the ability to make transformative change…. There is too much of a tension between the child’s needs and the provision available. The significant funding shortfall is a serious contributory factor to the failure on the part of all involved to deliver on the SEND reforms and meet children’s needs. Ultimately, however, unless we see a culture change, within schools and local authorities and the Government, any additional money will be wasted and make little difference to their lives*.’[[36]](#footnote-36) PP

There needs to be a clearer framework, within the Graduated Response of the SEN Code of Practice, for criteria that could determine the need for a referral for a ‘summative’ diagnostic assessment, and how this might draw down funding, be linked to an ECHP and, potentially, onward to the DSA. Teachers, specialist assessors and psychologists working for local authorities and schools could, as many already do, in the initial stages of working with children with literacy difficulties, formulate shorter, interim or formative literacy skill-based assessments that identify need and suggested interventions without applying diagnostic labels. However, children and young people with persisting literacy difficulties should be entitled to access to a state-funded diagnostic assessment (which could also later be used for eligibility for DSAs). State-funded assessments are, arguably, already available via a school’s notional budget. However, such budgets are rarely adequately ring-fenced for specific purposes. The criteria below could determine eligibility for referral:

* Firstly, that summative, diagnostic assessment should not, as happens now in some areas of the UK, be seen as the pre-requisite to the allocation of support but should be seen as part of a progressively specialist plan for assessment and intervention.
* Before referral, the school should have carried out a series of literacy assessments and interventions and the child’s progress through these assessments and interventions monitored, recorded and evaluated.
* If no significant age-related progress is made after a six-twelve months’ intervention and targeted teaching, referral should be made for a state-funded diagnostic assessment carried out by an appropriately qualified psychologist or specialist teacher-assessor.

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| A summative assessment may or may not identify a developmental difficulty such as dyslexia. Where it does, what form of subsequent re-assessment might best determine ongoing *and* changing needs as students progress through the education system and into work?  |

## D-8 Assessment for access arrangements in examinations / other educational adjustments

In England, Wales and Northern Ireland, there is a set of regulations, run by the Standards and Testing Agency (STA)[[37]](#footnote-37) at primary school level for access arrangements and accommodations for pupils taking the Key Stage 2 tests[[38]](#footnote-38). At secondary school level in England, Wales and Northern Ireland the Joint Council for Qualifications (JCQ)[[39]](#footnote-39) system for access arrangements assessments provides a specific, highly elaborate and annually updated framework for the allocation of resources, such as extra time or the use of a computer, to support students with identified needs in the examination system. The identification of a named specific or other difficulty is not necessarily a prerequisite for such support. There are a range of access arrangements that can be put in place without assessment evidence, including supervised rest breaks, a reader/computer reader, a reading pen, the candidate reading aloud, the use of a word processor, coloured paper/overlays, and more.

Candidates with needs other than cognition and learning (speech, language and communication, sensory and physical, social, emotional and mental health) do not require assessment evidence for access arrangements.

Candidates with an EHCP, IDP (Wales) or SEN Statement (NI), including those with dyslexia, do not need assessment evidence for access arrangements.

The only access arrangements requiring assessment evidence are extra time (25% or up to 50%) and/or a scribe (or a scribe alternative such as word processor with spell-check), and a language modifier (for which assessment evidence is required for all candidates).

The JCQ system provides access to adjustments for an annually increasing number of students. However, this can cause difficulties for students with specific learning difficulties transitioning to higher education, as the mechanism for assessing need, the access arrangements assessment, is not commonly seen as providing sufficient evidence for the identification of a *disability* or other need (e.g. for continuing additional examination arrangements, or specialist study support) at higher education level.

The COVID 19 pandemic has prompted a re-thinking of the time-limited sit-down examination system at all educational levels, with a move, particularly at H.E. level, for this mode of assessment to be replaced in some courses, by take-home examinations and coursework. It remains to be seen to what extent the ‘raison d’etre’ of the JCQ system will be challenged by these developments. However, since at least 2013, there has been a steady year- on- year increase in the numbers of approved access arrangements, with a marked increase in the 2015/16 examination series due to the inclusion, in the data, of approved arrangements from Further Education colleges. In 2021, the assessment criteria for 25% extra time changed, with scores relating to two different areas of speed of working now required - either 2 below average or 1 below average and 1 low average. This was brought in to address the increase in applications for extra time.

The main trends in access arrangements for GCSE, AS and A Level for the 2019/20 academic year in England[[40]](#footnote-40) were:

1. There were 460,750 approved access arrangements, up 13.9% on 2018/19. More than one type of access arrangement can be granted per candidate.
2. 5,375 centres (91.1% of all centres) had approved access arrangements for one or more of their candidates this year, a similar percentage to last year.
3. 25% extra time arrangements made up 64.6% of all approved arrangements in 2019/20, compared to 63.4% in 2018/19.

There is a complex set of reasons for why the proportion of students that appear to qualify for and benefit from access arrangements in examinations is increasing. A need is evident but the effectiveness and equity of these arrangements is less easy to ascertain. In 2017, a BBC Radio 4 Today programme[[41]](#footnote-41) investigation established that 1 in 5 students in independent schools received extra time in GCSE and A Level examinations while fewer than 1 in 8 students in state schools received this measure in examinations. A recent PhD thesis (EE McGhee, 2020) provides a useful analysis of the key issues as they affect students with SpLDs and, in particular highlights the following issues:

* The variability nationally in the availability to schools of specialist assessors to ascertain need for access arrangements at this level.
* That the student concerned is not directly consulted in the process of establishing need.
* There is little current evidence-based research to validate the access arrangements process.

In particular, there needs to be further research into the now fairly ubiquitous use of 25% extra time in examinations, and whether there needs to be greater variability according to need. A radical proposal here might be to allow *anyone* who felt they needed an extra 25% extra time in examinations at school, college or university level to use this provision (provided speed of working was not in itself an assessment criterion), reserving assessment only to provide evidence for further levels of accommodation and examination adjustments.

## D-9 Access to support, intervention and public funds. Issues of social justice and the drive to private assessment for dyslexia.

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| For children and adults, what **principles and criteria** should inform entitlement to assessment and intervention resources? What methods for the assessment and intervention for literacy difficulties could facilitate the fair and equitable distribution of resources and make the best use of the training, qualifications and experience of key practitioners such as SENCOS, psychologists, specialist teacher-assessors and teaching assistants?  |

There is currently, at both school and higher education level, a problem of equity and access to assessment. Elliott (2020) makes the point that the child with a privately paid for dyslexia diagnosis can avoid negative connotations such as ‘stupid’ and ‘lazy’ while those children with similar problems unable to attract that label through private assessment, cannot. There are quite high numbers of trained specialist teachers and psychologists (Driver Youth Trust, 2020) in the UK, but relatively few appear to be working in the state school system.

Because it is difficult to obtain a state-funded assessment for a suspected longer term manifestation of literacy difficulty such as dyslexia, concerned parents are driven to seek privately obtained assessments. The idea that middle class parents have secured unwarranted attention and resources for their children at the expense of poor readers (Elliott, 2020) is not necessarily borne out by the history (Kirby et al 2020; 2019). Kirby (2020a) suggests that the development of a parent’s movement around dyslexia was a response (often by parents in a position to investigate and research the concept of dyslexic difficulties) to a lack of provision for children experiencing non-typical reading development. Parents often faced active institutional resistance within and across the school system to recognising and making provision for this group of children, and this situation continues in some areas of the country, such as Essex.[[42]](#footnote-42) There is little evidence that parents ‘captured’ pre-existing resources that were then channelled to one group. Kirby (2020b) suggests ‘*the role of concerned parents….has not been a sinister plot to acquire undeserved funding, but a necessary reaction to the absence of state support for reading difficulties and so any other pathway to assistance.*’

Elliott has, however, continued to pursue the view that the identification of children as dyslexic draws limited resources away from the majority of struggling readers in schools. There is some very limited evidence from a Commons Education and Skills Committee Report in 2005[[43]](#footnote-43) that there is a correlation between income and placement in special and non-maintained schools (but not just in terms of placements for specific learning difficulties). This might suggest that middle class parents have been more successful at securing resources *outside* the mainstream school system, but not necessarily that they *diverted resources* from children with reading difficulties within mainstream schools.

Children formally ***identified as having dyslexia*** in state-funded schools in England are unlikely to form more than 1-2% of total numbers of children in those schools (see Table 3, above). Do you agree that the support allocated to these children might be responsible for diverting funds from other children with reading and literacy problems?

What evidence does or could support or contest the view that the identification of children as having dyslexia results in an inequitable distribution of resources to support struggling readers?

It is arguable that the recognition of dyslexia at school level has actually reduced dependence on statutory provision over recent years, a point made by the SEN Policy Research Forum.[[44]](#footnote-44) Referring to numbers of pupils identified with autism at SEND tribunal appeals they say, ‘*There is an interesting parallel here with provision for pupils with specific learning difficulties (SpLD). In 1998/9, they accounted for the highest proportion of appeal registrations (around a third). Numbers have significantly reduced. SpLD is no longer seen as a rare condition requiring highly specialist approaches, but part of the ‘business’ of all teachers.’ [[45]](#footnote-45)*

The accountability of teachers and schools for the progress of all children could be a powerful driver for early intervention where literacy progress is flagging, especially as teachers’ pay and promotion prospects are now dependent on children’s outcomes (DfE, 2012). However, the persistent inequalities which dog the UK’s education system, not least the very different socio-economic intakes of schools, suggest that progress is unlikely to be systematically or universally achieved. Resources and/or expertise are not always in place to enable early intervention.

The problem remains: while there is a wide range of interventions for struggling readers that can work for most children, there are small numbers who fail to respond to even the best-founded intervention and need a more tailored approach; these are the children we tend to identify as dyslexic (Vellutino et al, 2004; DCSF & Rose, 2009; DYT, 2017). ‘*Approaches that focus on widely available models, such as good classroom teaching of phonics, handwriting, vocabulary building or targeted interventions (e.g. volunteer one-to-one reading and parental engagement), are of course immensely valuable. On the whole, they do benefit all children. However, what they will not do is ensure literacy for all*,’ (DYT, 2017, p 7).

One of the key issues is that in many schools, higher-level resource allocation and interventions are dependent on the *prior assessment and identification* of a named specific learning difficulty or disability. Yet it remains quite difficult to be referred for a funded diagnostic assessment for a specific learning difficulty through the state school and higher education system in many areas of the UK and, even when it is achieved, for children, ongoing 1:1 *support* is often privately funded due to lack of resources in schools. Although it is often the case that resource managers in schools have to make difficult decisions about, and face competing pressures for, the allocation of scarce resources, the experience of assessors and many parents provides an important perspective. Assessors hear repeatedly how, for the children and adults they assess, support in schools was ineffective and inadequate, and how parents have had to fight for appropriate intervention.

Policy and funding imperatives have meant that educational and governmental institutions have responded to their obligations under the Equality Act by prioritising ‘reasonable adjustments’ such as additional examination arrangements and the Disabled Students’ Allowance. These provisions need to be in place alongside the considerable resources required to support pedagogical changes where they are most needed, i.e. in early years education and ongoing, monitored and evaluated interim assessments for struggling readers in primary schools, *and*, where deemed necessary, in good quality, state-funded, timely diagnostic assessment and targeted support for those with persisting and complex difficulties.

Currently, budgets for carefully structured literacy interventions, access arrangements’ assessments and specialist staffing are particularly circumscribed. In a recent survey[[46]](#footnote-46) of 1,500 head teachers in England, carried out by the National Association of Head Teachers, 97% of respondents said that funding for SEND pupils was insufficient, representing almost unanimous agreement. If specialist teachers assessors and/or psychologists are to be employed as mainstream ‘literacy leaders’ and assessment and intervention specialists, either directly, or as a contracted service, there is an urgent need to provide schools with adequate, ring-fenced budgets for this purpose.

## D-10 Who can provide progressive specialisation in assessment and intervention for literacy difficulties?

There is currently a lack of local ‘literacy leaders’ to develop and lead coherent programmes across local authorities. A new National Professional Qualification (NPQ)[[47]](#footnote-47) in Leading Literacy, available from autumn 2022,could support pedagogical changes if it included issues around the assessment and support of students with specific learning difficulties. The proposed content framework for this qualification includes ‘promoting the assessment of reading and writing where students are struggling with these skills’, but there is no mention of specific learning difficulties/dyslexia. To be most effective nationally, understanding the needs of children with specific learning difficulties would need to be embedded in the Initial Teaching Training (ITT) Core Content Framework, or be a required post- ITT additional qualification for teachers working in early-years settings and primary schools.

More problematically, there is no coherent vision of how best to employ the skills and expertise of educational and other psychologists, specialist teachers, and teaching and therapeutic support staff working in and for schools. In their fourth important review of how literacy difficulties are being addressed in schools (‘*Hide and See*k’ Driver Youth Trust, 2020) the authors turn their attention to the specialist provision available to learners with literacy difficulties.

The Driver Youth Trust report is critical of the ways in which the multiplicity of providers, professional organisations and accreditation boards and routes to qualification for specialist teachers-assessors provides a very muddied and opaque landscape, where the skills of specialist teachers and specialist teacher assessors become easily undervalued and misunderstood. To improve access and deployment of specialist teachers it calls for greater rationalisation and coherence regarding qualifications, accreditation, registration, and school funding. It also suggests that specialist teachers, like their educational psychologist colleagues, should have a greater role in supporting and training their teaching peers, arguing that the skill-sets of psychologists, specialist teachers and therapists seem absent from the government’s strategies for Covid-19 recovery for schools, let alone for children identified with specific learning difficulties.

In initial and ongoing teacher training:

* The SEN Code of Practice and Teacher Standards emphasise that all teachers are teachers of children with SEN but such training is generally felt to be limited or inadequate, and often occurs at too late a stage within PGCE/BA Ed ITT courses, when trainees are under too much pressure to complete practice and assignment commitments.
* Where ITT is school-based, how can we ensure that training mentors/existing teachers are sharing good, evidenced-based practice? How versed are such teachers in reading science and relevant research?
* How best can the pedagogical knowledge and understanding of existing teachers be developed?

In tertiary education the specialist teaching role has been undermined by the process for obtaining specialist support via Disabled Students’ Allowances, leading to a plethora of zero hour and guaranteed hours contracts rather than substantive contracts. Specialist teacher-assessors can assess and support students on a one-to-one basis, develop inclusive learning environments, advise teaching staff and undertake pedagogical research. However, higher education management policies to contract out assessment and tuition to private agencies have resulted in the loss of much specialist experience in the student support/well-being/disability departments of many universities.

In addition to there being a dyslexia specialist in every school, should there be at least one dyslexia specialist in every university and Further Education college?

Is there a need to develop ‘community of practice hubs’ for specialists, focusing on developing knowledge and sharing expertise?

## D-11 The most important intervention? Narrowing the attainment gap in reading.

As argued in [SECTIONS A](#_SECTION_A:_RATIONALE.), [B](#_SECTION_B:_THE) and [C](#_SECTION_C:_), dyslexia is best characterised as a dimensional phenomenon, with no absolute cut-off from poor reading (Snowling, Hulme and Nation 2020), although ‘poor reading’ can involve different characteristics in different learners and, as a concept, is also subject to variable interpretation. In some children, ‘poor reading’ may represent a transitory phase of delay, for other individuals it may encompass longer lasting low levels of comprehension and oral language knowledge, and in dyslexia there are likely to be ongoing and intractable decoding problems that affect reading fluency and spelling and writing accuracy. Resilience factors(e.g. good oral language knowledge and skills) can be (partly) protective and, in a dyslexic developmental trajectory, may mean that reading comprehension and other academic learning is less severely affected, if intervention is prompt, sustained and, where necessary, intensive.

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| Should the label dyslexia or alternative label such as specific or developmental literacy difficulty, therefore be *‘most appropriately reserved for those individuals with persisting literacy difficulties who have not responded to intervention*’ (Muter, 2021)?  |

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| Given the large proportion of children with dyslexia diagnoses who also have oral language problems, how should the identification of dyslexia *and* DLD be approached?  |

What methodologies and practices do, therefore, ensure the most effective, timely and successful assessment, intervention and support for all children and young adults with literacy difficulties, including those with an identified developmental difficulty such as dyslexia?

On December 7th 2021, in Parliament, Matt Hancock M.P. introduced a Private Member’s Bill calling for all children to be screened for dyslexia before they leave primary school. However, given the many different models for the screening, assessment and intervention for reading and associated literacy difficulties in UK schools described above, it is not clear what such a screening might involve, who would carry it out and what would happen as a result. It is also not clear why such a measure has not been integrated into the DfE SEND Review and Green Paper[[48]](#footnote-48) and /or the Schools White Paper[[49]](#footnote-49).

Above all, a culture change is required which provides funding to schoolsto allow specialists, teachers and support staff to help struggling readers / children with SEND to be appropriately supported until skills have been mastered, and, where necessary, to receive periods of focused and intensive support.

At present, in the UK, there are several key organisational models for assessment and intervention for children at risk of literacy learning delays.

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| Which, or which combination of the models described below, provide the greatest likelihood of providing effective, sustained and monitored interventions for struggling readers, including learners with dyslexia? What elements in each of these models would best narrow the attainment gap in literacy acquisition between typically and non-typically developing readers, including those identified as having dyslexia? |

### Response To Intervention (RTI) / Assessment Through Teaching (ATT) / Dynamic Assessment and Intervention / Multi-Tiered Systems of Support (MTSS) framework models

In primary schools, where there is failure to master a skill, Assessment Through Teaching (ATT) and Response To Intervention (RTI) schemes allow opportunities to change teaching and pedagogy, rather than labelling the child with a developmental difficulty at too early a stage. These frameworks are influenced by insights from reading science, and, where they are consistently funded and implemented, and focus on upskilling teachers, provide positive examples of an assessment and intervention model that can be successful in driving up literacy attainment for most struggling readers. The drive behind the ATT models is one of ‘faultless instruction’ i.e. failure to learn is to be seen as a consequence of what is taught and cannot be attributed to any characteristics (e.g. ‘dyslexia’) of the student. Learner errors are seen as design flaws in instructional programmes and should lead to programmes of instruction being amended or refined. Key features of this approach may include:

* Encouraging schools to improve their systems for tackling literacy difficulties for *all* children struggling with literacy acquisition.
* Ability to be focused around a wide age-range, i.e. Years 1-10, including implementation in special schools.
* The promotion of skills- based assessments that can be used by all teachers, i.e. testing of the first 100 common words + approx. 60 phonic skills, which together make up 90-95% of written English. Some approaches, such as the scheme developed in Staffordshire and Warwickshire, have been developed firmly around systematic synthetic phonics.
* A focus on developing reading accuracy, fluency and generalisation, using real books to promote a love of reading and to test how well a child can read when naturally occurring English is used.
* Termly reassessment of the child’s progress and subsequent changes made or further teaching topics (e.g. spelling, comprehension strategies etc.) introduced.
* The weekly collection by schools of data on children’s progress through the schemes, meaning that smaller groups of children who continue to struggle can be identified.
* Specialists working directly with those most in need, while offering advice and support on implementation to large cohorts of teaching staff. Psychologists can use their time to observe and advise on scheme implementation rather than carrying out individual assessments.

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| **EXAMPLE: STAFFORDSHIRE AND WARWICKSHIRE LITERACY APPROACH** |
| Staffordshire and Warwickshire County Councils have developed literacy guidance documents for schools which concentrates resources on developing school’s internal systems in order to identify and address literacy difficulties as soon as possible without needing to wait for specialist assessments.  The Educational Psychology Services have developed a recommended approach to literacy which uses an Assessment through Teaching framework to support schools in improving reading skills and increasing the enjoyment of reading through the use of real books.For more details please see:[EP Recommended Approach to Literacy - Staffordshire County Council](https://www.staffordshire.gov.uk/Education/Access-to-learning/Graduated-response-toolkit/School-toolkit/EPS-COVID-19-recovery-materials/EP-Recommended-Approach-to-Literacy/EP-Recommended-Approach-to-Literacy.aspx) |

### Traded or contracted-in specialist assessment, intervention and tutoring services.

Models for these types of services vary across the UK but the principle that underlies them is of the development of a ‘hub’ of specialist assessment and intervention services, staffed by highly trained and qualified specialist teacher-assessors/psychologists, whose services are bought in by schools or local authorities to provide direct assessment and periods of time-limited specialist individual or small-group support to children identified as being in need of those services, and, in some cases, to provide an advisory service to teachers regarding children with SEND.

There are relatively few of these types of service ‘hubs’ but where they do exist, they can offer:

* Specialist well-informed and researched interventions from experienced and knowledgeable staff.
* Collaborative services, working with schools to support and train their staff, including learning support and teaching assistants.
* Advice on embedding ‘dyslexia-friendly‘ practice and strategies in the classroom.
* Access to additional, more specialised resources and technological aids for children who could benefit from them.
* The management of parental expectations regarding support.
* Evaluation, assessment and monitoring of interventions and pupils’ progress.
* Referral routes to other services.

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| **EXAMPLE: WANDSWORTH LITERACY & NUMERACY SUPPORT SERVICE** |
| This service supports children in schools who have been identified as having special educational needs in the areas of literacy and mathematics. The L&NSS is now a bought in service.* Individual schools 'buy in' a Specialist Literacy or Numeracy Teacher for a morning, an afternoon or a whole day per week for one academic year.
* The teacher then provides specialist assessment/report, advice/consultation, teaching, project work and in-service training in the area of either literacy or mathematics.

Pupils must be referred to the service through their school SENCo, with permission of their parents/carers. The L&NSS organises sessions for parents about identifying and supporting literacy and numeracy difficulties. These are usually held termly and are advertised through schools and the council website.<https://fis.wandsworth.gov.uk/kb5/wandsworth/fsd/service.page?id=vOUM2_MLd2I>  |

### Local Authority Educational psychology services/ school- employed specialist teachers / SENCos and learning support teams.

There are relatively few specialist teacher-assessors or psychologists employed directly in schools, despite the recommendation of the Rose Report 2009 that there should be a specialist teacher in every school[[50]](#footnote-50). Where they do exist, they are likely to face considerable individual workloads, especially if they carry out assessment and / or tuition, and may not always have the support of higher management, regarding policies and teaching approaches. They can and do provide training and support to colleagues but this is likely to remain at the school level, rather than be shared across schools, unless the teacher works within, for example, an Academy chain or leads an RTI approach across an authority. Learning support teams in schools, consisting of a variety of people with a range of non-teaching qualifications, are often tasked with delivering direct support to children. However, without specialist knowledge and training and appropriate levels of pay, there are limits to what can and should be expected of this group of staff in delivering planned, specialist support.

### Independent assessment providers, both psychologists and specialist teachers.

A range of charities, private assessment agencies and independent self-employed specialists, both specialist teacher-assessors and psychologists, cater for parents and individuals seeking assessment and tuition ‘outside’ the school system. The existence of and continued demand for these providers confirms a lack of appropriate provision in schools but there are only limited systems for monitoring the effectiveness of interventions of this kind (e.g. via professional re-registration and CPD monitoring processes) and no way of knowing the extent to which privately commissioned and paid for interventions contribute to the overall progress of an individual with a developmental reading difficulty.

However, what these independent and specialist tuition providers often have the freedom and space to pursue, is a very wide range of creative and personalised approaches to supporting and enabling students to understand and manage their difficulties. The relationships established can re-motivate students, can provide the important sense of being understood and listened to and can support students by modelling, exploring and using imaginative, technological, multi-sensory and skill-based solutions to their difficulties. They can also teach metacognitive strategies i.e. understanding one’s own learning strengths and weaknesses and devising strategies to tackle areas of difficulty.

For example, two powerfully motivating methods for supporting reading and writing skills are reciprocal teaching and co-writing. Both these methodologies support dialogue and communication between student and teacher, thus also building oral language skills, where they are lacking, or utilising the students’ language skills where they are not. When resources are scarce, 1:1 support may be regarded as a luxury but even a limited number of sessions of sustained and purposeful 1:1 or small-group teaching/learning, whether in person or via video platform, can have a long-lasting impact. Most specialists working in this way can provide testimonies from students to this effect.

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| **EXAMPLES: BRITISH DYSLEXIA ASSOCIATION, PATOSS TUTOR REGISTER, HELEN ARKELL DYSLEXIA CHARITY, DYSLEXIA SCOTLAND** |
| See: <https://www.bdadyslexia.org.uk/>See: <https://www.patoss-dyslexia.org> See: <https://www.helenarkell.org.uk/> See: [www.dyslexiascotland.org.uk](http://www.dyslexiascotland.org.uk)  |

### Volunteer-based, ad hoc, charity-funded or other behavioural, computer based reading /literacy intervention programmes purchased by schools and colleges.

Many schools organise volunteers to support reading practice, benefit from funding from literacy-promoting charities, or buy in other types of computer based or behaviourally-based shorter term assessment and linked intervention programmes to support children’s reading and other literacy skills. While the evidence base for some of these programmes is questionable, they do differ. The reliability and validity of each programme needs to be considered. Some interventions appear to be of dubious quality with an unclear or small-cohort research evidence base or where the apparent success rate of the intervention is amplified by an intensive short-term training, which may not lead to longer-term sustainable progress. Some are targeted learning interventions for the child, while others have features that might enable teachers to understand more about the literacy *and* cognitive difficulties faced by the child. Very few of these programmes have been evaluated (in randomised controlled trials) for their efficacy to support children with persistent trajectories of dyslexia.

Commercially produced and heavily marketed screening, assessment and intervention tools do need to be treated with caution because of the intrinsic conflicts of interest they represent. It can be very helpful to consult the Education Endowment Foundation (EEF)[[51]](#footnote-51) which publishes independent evaluations of educational programmes.

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| **TWO EXAMPLES: LEXPLORE ANALYTICS AI READING SOFTWARE and LEXIA**  |
| 1. See [www.lexplore.com](http://www.lexplore.com)

Lexplore Analytics[[52]](#footnote-52) provides an interesting case-study in the potential and limitations of what is, in this case, assessment software that has a strong research evidence base, fortified by a machine learning model using large data sets to produce and dynamically refine its normative, standardisation data. The software package available for use in schools offers a screening methodology based on eye-tracking technology combined with a short set of reading comprehension tests. The assessment takes 2-5 minutes per pupil but appears to be strongly predictive of levels of reading competence and fluency and can be used to monitor reading progress. **Pros and cons:**It is not yet known whether problems in eye-tracking ‘cause’ reading difficulties or whether they *reflect* reading difficulties at the cognitive processing level. However, this technology may help teachers to more carefully observe the reading difficulties of the children they work with, identify ‘sticky’ words they are struggling to read (through the way the program monitors ‘fixations’), and target and tailor interventions around those children identified as experiencing the most difficulties. However, this screening tool falls between two areas of expertise. It could be viewed as a test of visual difficulties, in which case it could be best administered by visual experts as part of an eyesight test. Or it could be viewed as a test of reading but it gives limited information about reading beyond eye fixations, and reading speed. There is limited analysis of the words that the individual pauses over. At present it gives no feedback about reading accuracy, and the exploration of comprehension is very limited. Further information can be found on the company’s website, including detailed information regarding the research basis and development of this technology. While this technology cannot confirm the nature of visual problems in children, one of its interesting by-products is that it can flag up potential visual difficulties that need to be explored by an optometrist. A collaboration between experts in eyesight and experts in reading could enable the further development of this product.1. See:<https://www.lexialearning.com/core5>

Lexia Reading Core5® (Lexia) is a technologically based, personalised programme that aims to improve reading skills and is developed by Lexia Learning Systems LLC. It consists of three elements: personalised online student activities, real-time reporting of student progress, and paper-based resources to guide teacher instruction where needed. Teachers can use it to target struggling readers, as a whole class or whole school intervention, or as a home use supplement to teaching.The Education Endowment Foundation (EEF)[[53]](#footnote-53) carried out a randomised controlled trial of this programme, involving 697 pupils over 57 schools. In the study, pupils began with the online diagnostic assessment which placed them at the correct starting point in the Lexia programme. They then worked independently on tablets or other devices in small groups away from the classroom setting. Facilitators, who are teachers or teaching assistants (TAs), supported pupils in these sessions. Groups of six or seven children took part in each session. Schools were asked to schedule four sessions of 30 minutes per week for those children, for 12 – 24 weeks.The evaluation also measured the individual skills that make up overall ‘reading skill’, allowing comparison with previous studies and to identify any areas of strength or weakness in the programme in terms of enhancing children’s reading development.The independent evaluation found that children offered Lexia made the equivalent of two additional months’ progress in reading, on average, compared to other children. Children eligible for Free School Meals (FSM) who were offered Lexia made, on average, the equivalent of three additional months’ progress in reading compared to other children eligible for FSM. Most pupils managed to work independently with little scaffolding from teaching assistants. The evaluation also found that the programme had a positive effect on skills that are important for further literacy development.However, as a cautionary note, teachers and teaching assistants felt that **Lexia was unsuitable for a small number of pupils, especially those with Special Educational Needs and Disabilities and those whose reading level was very low.** |

For assessors writing reports and providing recommendations for interventions, the questions in the following table provide a framework for thinking through what might be most helpful to the child, the parents, teachers and schools.

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| **At what levels are the child’s current difficulties?** (not all of the adjacent list may apply or be relevant) | In oral vocabulary?In alphabetic knowledge?In sound-symbol mapping?In whole word and irregular word recognitionIn reading?In writing?In spelling?In mathematics?In listening comprehension?In language processing?In phonological awareness?In visual processing?In attention?In memory?In motor skills?In articulation?In executive function i.e. planning and decision-making?In social and emotional domains? |
| **Are there medical or other developmental conditions that need to be taken into account?** | In hearing?In vision?In communication and social skills?In motor skills?Other e.g. chronic health impairment? Mental health condition? |
| **What resilience factors in the child’s profile can inform the intervention?** | Has the child:Good vocabulary levels?A positive orientation to learning?Specific talents and interests?Strong verbal and/or non-verbal skills?Knowledge and experiences in particular areas? |
| **What previous interventions, if any, have taken place? With what success?** | What did previous interventions target?Using what methods? |
| **How much further intervention is needed? Delivered by whom? For how long?** | Should support be daily, weekly or other type?How many people will be involved in delivering the support?Should it be 1:1? Small-group? Classroom based? What level of teaching specialism is required for delivery? Over what period of time will the intervention be delivered?Will the child/parents be involved in planning the intervention? |
| **What kinds of interventions?** | What interventions may best address the difficulties identified?For what specific purpose has the intervention been designed? By whom?What evidence is there that the intervention will suit the individual concerned or be effective? Does the intervention involve training/skill-building in alphabet knowledge/sound-symbol linkage/ phonological skills / decoding skills/reading comprehension skills/ writing skills/spelling skills? Has the intervention programme been evaluated via a randomized controlled trial? Does the intervention include the development of oral language skills? Is the intervention geared towards a particular developmental stage or age group? Is the intervention set up to ‘train’ cognitive skills such as, for example, working memory? With what evidence-base?Does the intervention teach management strategies for difficulties in cognitive skills? Will the intervention require specific (non-staff) resources?Has the intervention a multisensory focus? Does the intervention teach metacognitive strategies?Will the child require specific aids or adjustments in the classroom?  |
| **How will the intervention be evaluated and monitored? And by whom?** | How will progress through the intervention be monitored and evaluated? How often? Who will collect and disseminate the data? With whom will it be shared?How will progress criteria be decided? Will short-term gains be reassessed to check that they have been consolidated in the longer term? How will this happen?  |
| **What will happen if the child does not respond to intervention?** | Will the intervention be modified/abandoned?After what time-frame, or evidence from what data? What will happen next?  |

Table 6. Questions to inform programmes of intervention for children identified with dyslexia / persistent literacy difficulties.

## D-12 Interventions for adults (post 16 years)

Post 16 years, developmental trajectories involve a range of complex, interrelated factors. Appropriate levels and types of support and intervention may depend upon:

* Whether an individual has been previously identified with and/or supported for a specific learning difficulty.
* In what context an individual is working or studying, including work placements while studying.
* What specific challenges they face in their work or study environment, especially if this is new or unfamiliar.

### Higher Education

At H.E. level and in the workplace, equality and disability legislation has successfully attracted resources to support adults with SpLDs, although this situation is in flux and may change. The total number of students identified with SpLDs in H.E. has grown almost every year (see table below) since 2014, although the rate of growth is not particularly dramatic and is not as great as the number of students identified with mental health difficulties, which has almost trebled over the same period. The numbers of students now entering university in the UK with a dyslexia / SpLD ‘diagnosis’ or being identified as dyslexic while attending university, is, arguably, a testament to the effectiveness of the label in facilitating access to higher education for a group of students who might otherwise have chosen other routes to study or employment.

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| Year | 2014/5 | 2015/6 | 2016/17 | 2017/8 | 2018/9 | 2019/20 |
| Number of students identified with SpLDs in H.E. | 106,595 | 109,560 | 111,745 | 111,680 | 113,410 | 114,610 |

Table 7. Total number of students identified with SpLDs in H.E. Data extrapolated from HESA statistics. <https://www.hesa.ac.uk/data-and-analysis/students/table-15>

### Disabled Students’ Allowances (DSAs) in Higher Education

In higher education, current systems for funded support require the labelling of ongoing literacy and other specific difficulties as *disabilities.* Access to specialist support and intervention for a learning difficulty, health problem or disability is funded through the Disabled Students’ Allowance (DSA). Undergraduate and postgraduate students can be awarded up to £25,000 a year for support, although most students are allocated less than this. Applications for the DSA are made through Student Finance England (or equivalents organisations in the devolved governments), and, for a student with a learning difficulty such as dyslexia, require the production of evidence to support the application, usually a copy of a diagnostic assessment report (DAR) from a practitioner psychologist or suitably qualified specialist teacher. Once the DSA application has been accepted, there is a further layer of ‘assessment’ provided by Needs Assessors who meet with the student to ascertain more specific course-related requirements for support, equipment etc. Once the needs assessment report has been produced there is complex and rule bound system for accessing study support and other provision, which often requires searching for an appropriate and approved supplier. This can be a problematic, lengthy and bureaucratic route to support.

There can also be problems in accessing support in Higher Education if difficulties do not meet the thresholds for identification as a disability. Evidence reviews of support systems and interventions for specific learning difficulties across the UK in 2020, commissioned by the Commission for Science and Technology under the auspices of the UK Government’s Office for Science[[54]](#footnote-54) came to similar conclusions, suggesting that there was a ‘disconnect between the needs-based interventions used in schools and the formal diagnosis required by universities and employers.’ The review recommends that ‘It would be useful to align these systems more.’ There may be a case for an assessment more akin to that used for JCQ Access arrangements that could provide evidence for additional arrangements in examinations at H.E. level for those students seeking this form of adjustment alone. Such assessments would be less time-consuming and there could consequently be fewer financial barriers to their access or implementation in H.E.

Some universities have ‘opted out’ of the DSA system for some aspects of student support, and provide study-support services ‘in-house’, sometimes available as an inclusive offer to all students and sometimes reserved for students identified with specific learning difficulties such as dyslexia (and delivered by specialists). This variation across universities can mean that one cohort of students is required to engage with the label of ‘disability’ to apply for study support via DSAs while another cohort needs not necessarily to do this to access support and examination accommodations.

There is an argument for reconsidering the evidence levels required for putting in place, for example, access arrangements in examinations and short-term study support at H.E. Level, as opposed to funding for more intensive, longer-term study or other technological support for students with severe, persistent and complex specific learning difficulties / disabilities.

What kind of assessment could best provide the evidence for the need for examination arrangements at H.E. level?

How can such assessmentsbest ensure access and fairness?

A study by Helen Duncan and Catherine Purcell (2020) compared the examination performance of a sample group of 357 students with SpLDs (236 who completed the exam by hand with 25% extra time, and 121 who word processed their responses with 25% extra time). The papers of the SpLD participants were matched with 357 randomly selected typically developing peers who sat the same exams under standard conditions.

The authors found that:

* Exam access arrangements of 25% extra time or 25% extra time and the use of a word processor did not advantage the SpLD group in terms of increased word count, higher marks or higher classifications than their typically developing peers in timed, written, exams in Humanities or STEM subjects.
* Those access arrangements, for students in Humanities and Maths subjects, may even fail to fully level the playing field or compensate for the impact of having a SpLD on construct-irrelevant skills in exams.

While there is a dearth of similar UK studies for comparison purposes, the implications may be that:

* Extra time on its own helps to *narrow* the attainment gap, but a gap still remains.
* Extra time plus the use of a computer may level the playing field for some subjects but not others.
* Extra time plus the use of a computer *does not appear to* give students with SpLDs an unfair advantage.

Most Higher Education Institutions conduct their own student satisfaction surveys which may cover the impact of DSA funded student support in general terms, but it is rare for HEIs to attempt to directly assess the impact of student support for students identified with specific learning difficulties. In 2019 a DfE sponsored evaluation of user experiences of Disabled Students’ Allowances published by Johnson et al from IFF research[[55]](#footnote-55), found that there were generally quite high levels of student satisfaction with DSA funded support. However, students with specific learning difficulties were, overall, the least satisfied (of all categories of students with disabilities) with the support they received, and in particular, following needs assessment, found the process of obtaining specialist support difficult to navigate, given the multiplicity of potential suppliers of that support and the bureaucratic processes involved.

While there is some research that establishes the impact of DSA on student retention rates in Higher Education[[56]](#footnote-56), there has been no research on the effect of DSA provision on achievement, as measured by degree level classification or post-degree employability. Longitudinal studies are urgently required since many factors could be in play.

### Reasonable adjustments in the workplace

Under the terms of The Equality Act 2010, employers are under a duty to make ‘reasonable adjustments’ for individuals with a recognised disability, i.e. considered to be at a substantial disadvantage within the workplace when compared to those without dyslexia. Employers have a duty to make provisions, including within any advertising and recruitment process, if they know or are aware of the condition in an individual or if they could be reasonably expected to know. Individuals can access funding and other support for pursuing a diagnostic assessment under the Access to Work scheme: <https://www.gov.uk/access-to-work>

Many adjustments can be made at little or very reasonable cost, especially technological solutions inbuilt into most current software, and can make a great deal of difference to the employee with dyslexia. Most adjustments will be associated with administrative and clerical aspects of the job, e.g. for written communications – writing, reading, spelling, grammar, minute or note-taking, and filling in forms.

There can also be adjustments made for a possible range of co-occurring cognitive problems, i.e.:

* Verbal communications – a tendency to have trouble remembering or following detailed instructions. Communication clashes and differences in expectations.
* Diary, planning and time management – easily distracted, problems with concentrating, remembering appointments and times.
* General memory difficulties – especially with names, numbers and lists.

There is very little research that documents the experiences of individuals accessing adjustments and support in workplaces but in general, larger organisations with established Human Resources systems are more likely to commission assessments and be aware of and implement adjustments.

There are also a number of organisations that, alongside individual and workplace needs assessments, offer support to workplaces in addressing the workplace environment and culture so that the workplace better supports individuals with specific learning difficulties such as dyslexia.

### The Youth Offender System and Prisons.

There are likely to be strong links between lack of literacy (and numeracy) achievement, subsequent academic failure and criminal offending. Many incarcerated young people and adults have experienced significant behavioural and learning problems in school. However, governments do not routinely collect useful data on the literacy and learning needs of youth offender and prison populations, so it is difficult to establish the scale and nature of the problem. The Shannon Trust[[57]](#footnote-57), a project set up over 25 years ago to facilitate literacy learning in prisons, estimates that 50% of prisoners in the UK are functionally illiterate. This means half of the 85,000 people currently incarcerated have a reading age of 11 or lower – with 20% falling well short of that mark. Many prisoners are completely illiterate.

The 2022 Ofsted and HM Inspectorate of Prisons Report [[58]](#footnote-58) ‘Prison education: a review of reading education in prisons’ concluded that:

 Reading education is not given sufficient priority in the prison regime:

* reading is not a distinct part of the core education offer
* leaders focused on qualifications that were not suitable for half of the prison population
* early reading provision in prisons relies heavily on voluntary organisations to deliver it
* assessments for identifying prisoners’ specific learning needs and gaps in reading knowledge were inappropriate
* leaders do not have effective systems to identify and address prisoners’ reading needs

Much education provision is not organised in a way that supports prisoners to improve their reading:

* prisoners had as little as an hour a day out of their cells and few were let out to take part in education
* prisoners were often paid more to work than to attend classroom education
* libraries were rarely used to give prisoners opportunities to practise reading

The curriculum is not well designed to improve reading:

* prisons offered a narrow curriculum, with a focus on teaching prisoners to pass qualifications
* many teaching staff did not know how to teach adults to read
* many resources to help prisoners practise reading were unsuitable for adults learning to read

Prisoners with the greatest need to improve their reading generally received the least support.

As a preventative measure, to avoid young people entering the youth offender and prison systems in the first place, there is an urgent need to implement, at school level, the recommendations made in this paper. Given the scale of the problem and the depth and complexity of need outlined in the Ofsted and HM report, provision for assessment, literacy and learning within the youth offender and prison systems ought to represent the *most* specialised, *most* intensively funded and *most* sensitively and creatively delivered provision of all. The Ofsted and HM Report suggests that:

* There is a need for initial and ongoing assessments that pinpoint the specific knowledge and skills in reading that prisoners are missing or need to improve.
* A distinct part of the curriculum offer is dedicated to teaching reading.
* Specialist training and development on teaching adults to read is provided.

# SECTION D: SUMMARY.

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| * Schools cannot compensate for all the material and socio-economic factors that may affect learning and reading readiness in young children. However, the educational system in many parts of the UK is not yet structured to ensure that far fewer children and adults experience the profound impact that lack of adequate literacy skill has on daily living, study and employment. Allstruggling readers require appropriate and targeted assessment, intervention, effective monitoring, and resources. With timely and sustained intervention, individuals have a greater chance of enjoying successful educational and occupational experiences and/or academic success. The current and inequitable ‘postcode lottery’ regarding state-funded access to assessment and support for those struggling with literacy acquisition, needs addressing.
* The most important interventions are those that narrow the attainment gap in reading and associated literacy skills between individuals with literacy difficulties and their peers. These interventions then need to go further, to foster enjoyment of literature and writing. At present, methods for reading instruction in schools tend to be based on research into typically developing children. In schools, there needs to be a greater focus on the range of ways in which non-typically developing children experience literacy instruction and learning, i.e. how factors such as the influence of heritable, biological, and cognitive risk factors for reading delay (e.g. in phonological awareness, processing speed, attentional and memory difficulties) interact with ‘environmental’ factors such as English’s complex orthography, and the type and timing of reading instruction, to compromise learning.
* All research confirms the vital importance of early and sustained assessment and intervention for those struggling with literacy acquisition. Despite, in schools, greater awareness of and provision for children with persistent literacy difficulties, the specific and longer-term needs of children with atypical developmental profiles in literacy acquisition, including those who may also experience co-occurring developmental difficulties, are often neglected. Timing and readiness are crucial to reading interventions but for many children, more specialist levels of assessment and intervention come too late. Progression needs to be much more carefully monitored and documented, so that children can consolidate their learning and information is passed on when children move within and between schools and education sectors.
* For many younger children with literacy difficulties, regular, light-touch, assessments and checks on progress can help establish and support changing needs over time. For others, there can come a point when it becomes clear that a more comprehensive, summative assessment may be useful to support longer term interventions. Such assessment should include attention to relevant aspects of the child’s developmental history and current literacy attainment, around which more personalised and tailored approaches to intervention can be focused.
* Labelling these difficulties, where there is evidence to do so, does have utility and validity. Labels such as dyslexia can act as a descriptive short-cut to enable appropriate management, support and adjustments for children who have significant problems that hinder everyday life and who are likely to require interventions into and/or through adulthood. There is little research evidence to confirm that the identification of children as dyslexic diverts resources away from other children with literacy difficulties in schools. There *is* an argument for avoiding the over-early application of diagnostic labels, but there is also a need to ensure that children at risk of dyslexia are not denied this identification and the access to future resources that it might facilitate, when evidence from assessment could support this identification.
* The Graduated Approach within the SEND Code of Practice is inconsistently applied and implemented. Good quality, state-funded, timely diagnostic assessment and targeted support for those with persisting and complex difficulties in literacy and other associated learning difficulties should be available at all levels of the education system and especially at primary school level. At present the most consistent and best funded intensive support for individuals identified with specific learning difficulties is at higher-educational level. While this is a welcome testament to the success of such provision, there is a relative paucity of resources and specialist support where it is most needed, i.e. at primary and secondary school level, and in the prison and young offender systems.
* To be most effective nationally, understanding the needs of children with specific literacy and other learning difficulties would need to be embedded in the Initial Teaching Training (ITT) Core Content Framework, or be a required post- ITT additional qualification for teachers working in early-years settings and primary schools. Under-use and employment of trained, specialist staff, including psychologists and specialist teacher assessors, and lack of specialist training in theory and practice in teaching reading and associated literacy skills within the core ITT content framework, is undermining efforts to upskill classroom teachers. A model of **progressive specialisation** of assessment, teaching and learning in addressing the needs of children with complex and persistent difficulties in literacy learning is required. Teachers should be more fully involved in ongoing literacy assessments at the early stages of learning to read but there is also an important place for more specialised, state-funded assessment where difficulties persist and/or are more complex.
* In Higher Education the provision of support through application for the Disabled Students’ Allowance (DSA) is dependent on the prior identification of a specific learning difficulty (at *any* age) and, implicity[[59]](#footnote-59), as a ‘disability’. Provision of DSAs has successfully supported large numbers of students with specific learning difficulties, and research shows that examination arrangements can help to level the playing field, without giving an unfair advantage. However, the ‘disability’ label reinforces the unhelpful idea that dyslexia/specific literacy difficulties remain unchanging in their effects and in different contexts that place varying demands on an individual.
* Support for individuals with dyslexia in the workplace is driven by the Equality Act, and is better observed in organisations with larger numbers of employees and well-informed Human Resources departments. While there are some excellent projects, in the young offender and prison systems there is a lamentable lack of high-level specialist provision in assessment and in teaching literacy. Organisational problems within these institutions circumscribe the effectiveness of the schemes that do exist.
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# 10 KEY RECOMMENDATIONS

* 1. **Identify the needs of children at greater risk of longer-term difficulties in literacy acquisition.**

Coherent, well-evidenced assessment and intervention practices, such as Assessment Through Teaching (ATT) or Response to Intervention (RTI), can provide a framework that can successfully identify and support a significant proportion of children in schools who experience ongoing reading and associated literacy difficulties. Where this approach works, it reduces the chances of children with milder or temporary reading difficulties being labelled unnecessarily.

The content, structure and delivery of such a framework needs careful consideration, very strong resourcing, and the involvement of trained specialists (psychologists, specialist teachers) alongside appropriately upskilled classroom teachers and support staff, to lead, implement, evaluate and, where required, adjust interventions.

However, if implemented sensitively, RTI/ATT or similar programmes can also be designed to identify, before attainment gaps widen to the detriment of a child’s motivation and behaviour, the needs of a residual group of children at greater risk of longer-term difficulties in literacy acquisition and reading and writing fluency. These children, some of whom show no delay in vocabulary acquisition, aptitude and attainment in other, non-literacy based skills, will show especially delayed progress in the acquisition of literacy skills. Although there will be some variability in thresholds for inclusion in this group, to include more rather than fewer children is likely to produce better outcomes for those children.

All early literacy intervention schemes and policies, including ATT and RTI schemes, therefore need to incorporate assessment criteria and eligibility for access points to differential levels of support. This is because conceptualising all or most reading and learning difficulties as remediable with the same instructional programme, is unlikely to meet the needs of those with persistent and longer-term difficulties.

A particular issue is access to and progression through tiers of support. While it may appear more equitable and practical to place all students struggling with literacy acquisition on the same initial programme, and then monitor progress, a cautionary note is raised in a study by Al Otaiba et al (2014). This study, involved a randomised controlled experiment comparing the efficacy of two RTI models, dynamic and typical, for 522 students across 10 socioeconomically and culturally diverse schools in the USA. A typical RTI placement involved waiting to assess the pupil for 8 weeks while receiving foundation level instruction in Tier 1, whereas a dynamic placement immediately provided Tier 2 or Tier 3, i.e. more intensive and targeted small group interventions, on the basis of students’ initial screening results. Interventions were identical across conditions except for when they began. Analysis of standard score outcomes confirmed that students in the dynamic condition who received Tier 2 and Tier 3 interventions ended the study with significantly higher reading performances than students in the typical condition. This study suggests that there is no reason to delay providing increasingly specialised interventions. It points to the need to ensure intervention models are dynamic and that children do not remain unnecessarily ‘stuck’ in a tier or type of intervention when they may need more intensive support.

* 1. **Implement a progressively more specialist plan for screening, assessment, teaching and learning for those who require additional and longer-term support in literacy acquisition.**

In the first few years of primary school, while oral language and basic literacy and numeracy skills are developing, children need to have mastered each essential stage in typical reading development before they are expected to move on to more complex skills. Ongoing assessment of individual children experiencing difficulties in acquiring skills is best conceptualised as skills–based and ‘dynamic’ i.e. geared towards understanding what has been learned and consolidated, then identifying areas that need further work. The best time to evaluate children’s development of early literacy (and numeracy) skills is not after they are expected to have mastered them, but while they are learning those basics.

In addition to the information and data that can emerge from carefully implemented literacy intervention programmes such as those described above, there need to be key assessment ‘checkpoints’ built into the Years 1-6 curriculum. Criteria should be established for onward referral to progressively more specialist assessment and intervention when required. A new national strategy would set out plans for frequent light-touch but *diagnostic* re-assessment of learners struggling with literacy acquisition at regular time points between 4-9 years, i.e.

* The KS1 Phonics Screening Check needs to be re-thought, moving it away from a pass/fail test, which encourages ‘teaching to the test’ towards diagnostic tools, adding in oral language and listening comprehension elements, to check readiness to read. This would alleviate pressure on teachers to ‘teach to the test’ and means that literacy instruction could be designed with the child’s needs in mind, not the test requirements.
* The outcomes of this diagnostic test could then be used as an early indicator of those children who require additional and immediate intervention. It could be followed up with a similar teacher-led and designed assessment the following year and a plan for intervention integrated into whatever scheme the school uses for those children struggling with literacy acquisition.
* Greater resource provision needs to be put into developing children’s oral vocabulary and communication skills. These skills also require monitoring at regular intervals to assess a child’s readiness for more formal reading instruction. However, if a child has good or very good oral vocabulary and articulation skills but is still struggling with the initial stages of alphabetic knowledge acquisition and sound-symbol mapping, other possible reasons for lack of progress must be investigated, with dyslexia considered as a possible explanation.
* By 8/9 years old, any child still not showing signs of significant progress in literacy acquisition, despite standard interventions, should be more comprehensively assessed to ascertain the nature and level of their literacy difficulties. Both specialist teacher assessors and psychologists are qualified and experienced in carrying out these types of assessments and they are best done by practitioners employed or contracted by the schools they are working with. Intensive high level support and intervention will now be likely to be required.
* At this stage there may or may not be sufficient evidence to attribute a diagnostic label, but the possibility of a further summative diagnostic assessment should be discussed with parents/carers and their views sought as to when this would best take place. There may be a case for further delaying this full assessment until the outcome of higher level interventions is known. However, the option of a state-funded diagnostic assessment carried out by an appropriately qualified psychologist or specialist teacher-assessor should now be available.
* What is therefore required is a consistent, equitable, and state-funded assessment and intervention system that addresses the majority of reading difficulties at primary school level. This system should identify and support those children at greatest risk of prolonged and persistent difficulty *before* those difficulties start to affect access to the curriculum, self-concept and motivation to learn. The Scottish model provides an excellent example of a nationally accessible route. See [**APPENDIX 2**](#Appendix_2) below.
1. **To avoid premature summative or diagnostic testing, inform a decision to commission / put in place a diagnostic assessment by one or more of the following factors.**

While it is extremely important to develop whole school strategies to assisting struggling readers, these criteria should not be used as a reason to delay such assessment, given that children learning to read have a short developmental ‘window’ between 5-9 years, where such crucial learning usually takes place. The longer-term impact of even a short period of developmental delay during these years can be profound. The purpose of identification should always be focused around refining and improving effective interventions.

• Relative to age-expectations, the child‘s difficulties in reading accuracy, fluency and/or reading comprehension have been persisting or worsening for at least six months, despite appropriate, sustained and monitored interventions put in place.

• A child appears to be able to sustain progress in literacy acquisition or academic progress in subjects heavily dependent upon literacy acquisition only with a high level of support and intervention.

• A child is showing signs of distress and/or behavioural difficulties that appear to be linked to difficulties in literacy attainment.

• A child’s difficulties in literacy contrast markedly with other aspects of their achievement profile.

• A range of co-occurring difficulties (developmental, psycho-social, medical) is contributing to a complex picture of need, requiring specialist recommendations for intervention.

• Other (non-developmental) explanations for persisting difficulties have been considered e.g. frequent school moves, frequent school absence due to ill-health, trauma, the impact of learning loss during the COVID 19 pandemic, inappropriate or inconsistent instruction/intervention strategies etc.

1. **Incorporate an understanding of the needs of late developers and more persistent ‘non-responders’ at both primary and secondary level into any new national strategy for teaching literacy.**

Children with dyslexia can be resistant to conventional literacy instruction and also may take considerably longer to acquire automaticity in the sub-components of reading. For children at risk of dyslexia, intervening sooner and more intensively, is likely to be cost-effective. In the longer term, interventions such as the provision of access arrangements in examinations and technological support may still be required but literacy support may not need to be so intensive.

1. **Encourage specialist teacher-assessors and psychologists carrying out summative assessments to have a close working and collaborative relationship with the school attended by the child assessed and the teachers involved with the child.**

Ideally, specialist teachers and psychologists carrying out summative assessment for suspected dyslexia will be aware of the type of reading instruction used in the school, the attainment of the child to date, and the results of any school-based testing. They will gather a background history from parents/carers and seek the views of the child. The process to refer a child for an individual specialist assessment will include an analysis of the quality of teaching and interventions that have taken place before the specialist assessment was considered. The assessor will demonstrate an understanding of the policies and practices affecting literacy teaching and interventions in the particular jurisdiction they work in, alongside a theoretical grasp of typical and non-typical reading development. The assessor can offer concrete, implementable suggestions and recommendations for specialist teaching and learning objectives to support the child.

1. **Employ specialist teachers in schools to provide (and train others in) a range of techniques and strategies to harness the child’s interests, talents and abilities to re-engage with what is often an arduous reading process, to encourage a belief in their ability to write and to enjoy reading. There needs to be a significant boost to funding for specialist teaching and assessment services and professional training for teaching assistants and classroom teachers.**

Many (but not all) children with dyslexia can, in time, move beyond a decoding stage to achieve a greater level of automaticity in reading. Those that continue to read extremely slowly and inaccurately can find reading hugely de-motivating, tiring and stressful, and need continuing support to acquire higher level reading, writing and spelling skills. Children identified as having dyslexia often require more intensive, multisensory support, targeting spelling, reading, writing and, sometimes, mathematics skills, especially where there are co-occurring other developmental needs and if beginning to show signs of de-motivation. Children can be acutely aware of being perceived as slow learners on the basis of their reading difficulties, when in fact they may be learning other things very ably.

Children with dyslexia / specific literacy difficulties may need time to over-learn, practice and consolidate learning, employing every ‘sensory’ route, visual, auditory, kinaesthetic, for reinforcement of that learning, making good use of reading, writing and spelling games, IT based and other. They may need strategies for managing and circumventing processing, attentional and memory difficulties. Where systematic synthetic phonics has had little or no impact on reading development and a child remains over reliant on laborious letter-by-letter ‘sounding out’ as the only word attack strategy, more of the same approach is unlikely to be sufficient, and a different, supplementary, technologically-based intervention may be required, especially since much of what children read will be on devices such as computers, mobile phones, tablets etc.

Phonics based reading schemes may enable some children to gain practice and confidence in decoding before moving on to accessible and popular ‘real books’ that their friends are reading. However, there is a very limited range of ‘real books’ that some children (and adults) with severe reading difficulties can readily access without discouragement. Some children may respond to metacognitive approaches that introduce how and in what ways the language is complex and irregular, and that there is a range of strategies that can be used to learn to read and spell words accurately. Children may require emotional and social support in managing feelings of inadequacy as access to other areas of the curriculum may start to be affected by low reading skill.

Reciprocal reading, co-writing, repetition and reinforcement, development of oral narrative skills, practice in word recognition through use of analogy and generalisation, exposure to texts that increase lexical frequency and mnemonics to aid word imageability, alongside direct teaching of morphemic and grammatical constructions are just some of the techniques that can nudge children with decoding problems towards greater fluency.

1. **Develop the role of assistive technologies (ATs) in supporting children and adults with developmental reading and associated literacy difficulties.**

It is part of the training of specialist teachers that they familiarise themselves with the range and types of AT support available, both in mainstream and more specialist products and they are highly skilled in using AT products and technologies to support reading, spelling and writing skills in children (and adults). Academic studies looking at the effectiveness of such support for individuals identified with reading difficulties confirm that such support can boost children’s reading skills as well as their motivation (Svensson et al, 2019). There are many reviews of and sources of information about such technologies, which there is no space to cover in full here but an important point is that many of the most useful technological aids are now embedded in mainstream websites, technologies and programs (e.g. text to speech and speech to text functions) and although training may be required to use these functions effectively, they are not financially beyond the reach of most individuals or organisations.

1. **For older children and adults with persisting and significant difficulties in literacy skills and in a range of cognitive processing, attention and /or memory skills, explore strategies to manage these difficulties.**

One caveat here is that while direct interventions to support literacy skills can be successful, we do not yet know enough about if or how significant cognitive weaknesses in rapid naming, processing speed and working memory can actually be remediated from ‘within’, i.e. by the person themselves practising various ‘training techniques’, often computer or game based. There is some limited evidence to support this possibility from dementia and ageing studies but there are few systematic interventions in classroom and home contexts, and most of this type of support is based around teaching ‘metacognitive’ strategies.

Interventions for dyslexia that have been promoted as effective at the biological level (i.e. in monitoring or training cognitive processes) are highly controversial (Bishop 2013). Many safeguards should be considered before using or recommending such interventions. These include:

• Making it clear that these interventions are not ‘cures.’

• Being clear about the research (or lack of research) basis for any recommendations.

• Recognising that those with a vested interest (e.g. parents and promoters of chargeable programmes) have, in the past, often been quick to disregard the cautions and eager to embrace the possibilities.

• Ensuring that guidance that signposts interventions is very clear about their controversial nature.

1. **Reconsider the evidence levels required for putting in place, for example, access arrangements in examinations and short-term study support at H.E. Level, as opposed to that required for funding for more intensive, longer-term study or other technological support for students with severe, persistent and complex dyslexia and other co-occurring neurodevelopmental difficulties.**

Through secondary, F.E. and tertiary level education, a fresh look at the existing requirements for establishing and reassessing level and severity of need is required. There is also a need to make access to support much more straightforward by reducing the levels of bureaucracy endemic in the current outsourcing of DSA funded study skills support.

1. **Given the scale of the problem and the depth and complexity of literacy need outlined in the Ofsted and HM report into the Youth offender and prisons system in the UK, ensure highly specialised, intensively funded and sensitively and creatively delivered assessment, literacy and learning provision in these institutions.**

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(For a useful summary of research cited above, see: <https://theconversation.com/phonics-teaching-in-england-needs-to-change-our-new-research-points-to-a-better-approach-172655>)

**APPENDIX 2. SUMMARY OF POLICY AND PRACTICE DIFFERENCES ACROSS THE THREE DEVOLVED ADMINISTRATIONS OF THE UK.**

This Appendix summarises some broad policy and practice differences in the three devolved administrations.

1. **SCOTLAND**

In Scotland, the Scottish Parliament has responsibility for the legal framework for education, the curriculum, examination arrangements, and policy areas such as dyslexia. As a concept *Special Educational Needs (SEN)* was written out of Scottish educational legislation in 2005. Scotland refers to Additional Support Needs (ASN), a much broader concept than SEN. Under the Additional Support for Learning Act, provision of support for ASN is ‘needs-led.’ The ‘label’ is not required for interventions to be put in place.[[60]](#footnote-60)

In Scotland, Co-ordinated Support Plans are the nearest equivalent to Education, Health and Care (EHC) plans, which currently apply in England, Wales and Northern Ireland.

In January 2009, the Scottish Government, Dyslexia Scotland and the Cross Party Group on Dyslexia in the Scottish Parliament agreed on the following working definition of dyslexia:

'Dyslexia can be described as a continuum of difficulties in learning to read, write and/or spell, which persist despite the provision of appropriate learning opportunities. These difficulties often do not reflect an individual's cognitive abilities and may not be typical of performance in other areas.

The impact of dyslexia as a barrier to learning varies in degree according to the learning and teaching environment, as there are often associated difficulties such as:

* auditory and /or visual processing of language-based information
* phonological awareness
* oral language skills and reading fluency
* short-term and working memory
* sequencing and directionality
* number skills
* organisational ability.

Dyslexia exists in all cultures and across the range of abilities and socio-economic backgrounds. It is a hereditary, life-long, neurodevelopmental condition.

Learners with dyslexia will benefit from early identification, appropriate intervention and targeted effective teaching, enabling them to become successful learners, confident individuals, effective contributors and responsible citizens.'

Scotland has a child-centred, dynamic and holistic pathway to assessment for dyslexia, used by many local authorities, embodied in the *Assessing Dyslexia Toolkit (Scotland)[[61]](#footnote-61),* a national resource funded by the Scottish government.

In Scotland a wider range of assessment professionals can carry out diagnostic assessment. These include:

* specialist teacher-assessors with APCs
* HCPC registered psychologists
* Individuals with a suitable Postgraduate qualification of a level which would be acceptable for Associate Membership of the British Dyslexia Association (AMBDA), Level 7
* A General Teaching Council for Scotland (GTCS) registered teacher working in or supporting the school in Scotland which the student attended and who has completed the [Dyslexia Scotland and Open University 'Dyslexia: Identification and Support' (Module 3).](http://addressingdyslexia.org/free-online-learning-modules) The student’s assessment must have taken place while they were at school within the context of the local authority’s [Collaborative Assessment Pathway for Dyslexia and Literacy Difficulties](http://addressingdyslexia.org/assessing-and-monitoring) – available on the [Addressing Dyslexia Toolkit](http://addressingdyslexia.org).

In Scotland assessments to support applications for DSA allowance often have to be made once a student is in Higher or Further Education, even if assessment identification has been made by the school. Applications are made through the Student Awards Agency Scotland (SAAS).

Scotland does collect data on the number of children with dyslexia in state schools. In 2020 1.4 percent of the primary population and 6.1 percent of the secondary school population in Scotland were identified with dyslexia.

For more information see: Scottish Government (2017) *Additional support for learning guidance 2017* and *Supporting Children’s Learning: Statutory Guidance on the Education (Additional Support for Learning) Scotland Act 2004 (as amended). Code of Practice* (3rd edition). https://www.gov.scot/publications/supporting-childrens-learning-statutory-guidance-education-additional-support-learning-scotland/ and https://www.gov.scot/publications/supporting-childrens-learning-code-practice-revised-edition/ (accessed 25th March February 2022).

1. **WALES**

In Wales a new Additional Learning Needs (ALN) system has just (Sept 2021/January 2022) been introduced. This new system replaces previous SEN and LDD systems. The Welsh Government has published a FAQs page which is helpful: [https://gov.wales/additional-learning-needs-transformation-programme-frequently-asked-questions-html#section-52871](https://nam12.safelinks.protection.outlook.com/?url=https%3A%2F%2Fgov.wales%2Fadditional-learning-needs-transformation-programme-frequently-asked-questions-html%23section-52871&data=04%7C01%7C%7Ca0e227aa974741c5768b08da0b4f32f7%7C84df9e7fe9f640afb435aaaaaaaaaaaa%7C1%7C0%7C637834732044257039%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=pXdqSTTL0cveZdyE%2FEOtPKuDiAAlbfqYfiwc2JzoFrM%3D&reserved=0)

Extra support given to children in Wales because of an ALN is called Additional Learning Provision (ALP). Children currently on the old SEN system are gradually going over to the new ALN system. In

Wales (under the new ALN system) the EHC plans that exist in England will be called Individual Education Plans (IEPs) for children aged 3-16 and Learning and Skills Plans (LSPs) for post 16 learners. Please note compulsory education is only to 16 years in Wales, not 18 years as in England but legislation in Wales gives young people with ALN a right to education up to 25 years.

The Welsh Government is very hesitant to comment on different additional learning needs (e.g. dyslexia, or autism) and views them all under ALN guidance. There are also Welsh Language schools in Wales, with ALN provision delivered in Welsh. Wales is in the process of introducing a new school curriculum.

Stats on number of children reported with SEN in Wales can be found here: [https://statswales.gov.wales/Catalogue/Education-and-Skills/Schools-and-Teachers/Schools-Census/Pupil-Level-Annual-School-Census/Special-Educational-Needs/senreports-by-senprovision-welshenglishmedium-sentype](https://nam12.safelinks.protection.outlook.com/?url=https%3A%2F%2Fstatswales.gov.wales%2FCatalogue%2FEducation-and-Skills%2FSchools-and-Teachers%2FSchools-Census%2FPupil-Level-Annual-School-Census%2FSpecial-Educational-Needs%2Fsenreports-by-senprovision-welshenglishmedium-sentype&data=04%7C01%7C%7Ca0e227aa974741c5768b08da0b4f32f7%7C84df9e7fe9f640afb435aaaaaaaaaaaa%7C1%7C0%7C637834732044257039%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=HYo5oWFOk6CdCvDjkWWFlkdtHHrqXKmf%2FzdN73YXlE4%3D&reserved=0)

 In Wales DSA applications are made through Student Finance Wales

For more information see: Welsh Assembly Government (2004) *Special Educational Needs Code of Practice for Wales*. Cardiff: Welsh Assembly Government. Available at: https://gov.wales/sites/default/files/publications/2018-03/special-educational-needs-code-of-practice-for-wales.pdf (accessed 25th March 2022).

1. **NORTHERN IRELAND**

In Northern Ireland, The Task Group on Dyslexia, set up by the Department of Education in 2002 agreed a [definition](file:///C%3A%5CUsers%5CLindsayMillar%5CDownloads%5CBeck_et_al-2017-British_Journal_of_Special_Education.pdf) of dyslexia which they said was “broader than that of the British Psychological Society (BPS), permitting a wider range of factors than difficulties at work level,” describing dyslexia as:

‘a continuum of specific learning difficulties related to the acquisition of basic skills in reading, spelling, writing and / or number, such as difficulties being unexpected in relation to an individual’s other abilities.’

In Northern Ireland DSA applications are made through Student Finance Northern Ireland

For more information see: Department of Education Northern Ireland (DENI) (1996, 2005) *Code of Practice on the Identification and Assessment of Special Educational Needs and Supplement*. Bangor: DENI. Available at: https://www.education-ni.gov.uk/articles/special-educational-needs-code-practice (accessed 25th March 2022).

**APPENDIX 3. WHO CAN ASSESS FOR DYSLEXIA? THE ROLES OF TEACHERS, PSYCHOLOGISTS AND SPECIALIST TEACHER-ASSESSORS IN THE IDENTIFICATION OF SPECIFIC LEARNING DIFFICULTIES IN THE UK.**

Who can identify dyslexia? This appendix gives a brief summary of qualification pathways to assessment in this field.

**Qualification Pathway 1. Psychologists**

For psychologists intending to assess for suspected specific learning difficulties there is the pathway to Health and Care Professions Council (HCPC) registration. All registered practitioners are listed on the HCPC website. In 2009 legislation was introduced to protect certain occupational titles registered with the HCPC. Of these ‘clinical psychologist,’ ‘occupational psychologist’, and ‘educational psychologist’ are the three titles most likely to be held by a practitioner psychologist specialising in the assessment of suspected specific learning difficulties. To qualify for any of these titles a psychologist must have undertaken training and demonstrated competence in all the extensive and externally verified proficiencies as detailed by the HCPC for each psychology specialism.

While fundamental concepts such as language, memory, attention, and sensory processing, alongside a range of psycho-social influences on thinking skills form the knowledge base for all psychologists, to provide additional targeted training in the assessment of specific learning difficulties such as dyslexia, the British Psychological Society (BPS) is currently developing short training modules for practitioner and trainee psychologists.

**Qualification Pathway 2. Specialist teacher-assessors**

To become aspecialist teacher assessor (STA)requiressuccessful completion of a postgraduate (Level 7) accredited course which leads to an Assessment Practising Certificate (APC). There are three professional bodies which issue APCs: The Professional Association of Teachers of Students with Specific Learning Difficulties PATOSS, the British Dyslexia Association BDA, and The Dyslexia Guild. These bodies are overseen by SASC(the SpLD Assessment Standards Committee), and all offer and renew APCs in the same way and for the same cost.

These **are Level 7 qualifications in the full diagnostic assessment of SpLDs, which lead to specialist teacher/assessor status and** either membership of the professional body with anAPC or membership of the professional body without an APC. Credits are awarded on these courses which can, from some providers, be used towards the completion of a PG Dip or a Master’s degree.

Please see [**APPENDIX 2**](#Appendix_2) for the different situation in Scotland.

**APPENDIX 4. WORKING GROUP MEMBERS AND SECONDARY PHASE CONSULTANTS**

## WORKING GROUP

|  |  |
| --- | --- |
| **Name** | **Main role / Title** |
| **Chair:** **Caroline Holden** | Specialist teacher/assessor (retired)SASC Vice-Chair and Assessment Issues Co-ordinator |
| **Gillian Ashley** | Chief Executive British Dyslexia Association (BDA). Board Member SASC |
| **Sarah Crawford**  | Specialist Senior Educational Psychologist Warwickshire County Council |
| **Julian Elliott** | Professor & Principal of Collingwood College in the [School of Education](https://urldefense.com/v3/__https%3A/eur01.safelinks.protection.outlook.com/?url=https*3A*2F*2Fwww.dur.ac.uk*2Feducation*2F&data=04*7C01*7C*7C4f01b948c4a2433af71708d8e19069ea*7C1faf88fea9984c5b93c9210a11d9a5c2*7C0*7C0*7C637507357660605062*7CUnknown*7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0*3D*7C1000&sdata=kybqNa*2B6kpDWMsP3gYKPH2wsKiMAkWTdnEz4GGVzhcs*3D&reserved=0__;JSUlJSUlJSUlJSUlJSUlJSUl!!PhOWcWs!kzA0FL6dx7hNkmRkWl0ntj9Jv2FTFFtiqOPSS-JYW6hHRfm-9945P4PQGDTY-9gYfy0$),Durham University  |
| **Vivian Hill** | Professor & Programme Director of Educational Psychology Training at University College London, Institute of Education. Chair of British Psychological Society (BPS) Division of Educational and Child Psychology |
| **Nicola James** | Educational psychologist and founder of *Lexxic*Board member SASC |
| **Brian Lamb** | Visiting Professor of Special Educational Needs and Disability, Derby University  |
| **Brahm Norwich** | Professor of Educational Psychology and Special Educational Needs in the Graduate School of Education, University of Exeter |
| **Gavin Reid**  | Independent educational psychologist and author. Chair BDA Accreditation Board |
| **John Stein**  | Emeritus Professor of Physiology, University of Oxford  |
| **Joel Talcott** | Professor of Developmental Cognitive Neuroscience, Aston Brain Centre, Aston University  |
| **Richard Wagner** | Robert O. Lawton Distinguished Professor of Psychology, Associate Director, Florida Center for Reading Research, Department of Psychology, Florida State University  |
| **Jo Ward** | District Senior Educational Psychologist Staffordshire County Council |
| **Jane Warren** | Former Senior Teaching Fellow, University of Southampton Education School, now freelance specialist teacher assessor and trainer. SASC Board member, representing the Association of Dyslexia Specialists in Higher Education (ADSHE) |

## SECONDARY PHASE CONSULTANTS

In a **secondary consultation phase**, February-March 2022, the following organisations and individuals were invited to comment on the initial draft of the Report. Responses were reviewed and an amended draft of the Report prepared.

|  |  |
| --- | --- |
| **Anna Barnett** | Professor in Psychology, Centre for Psychological Research, Oxford Brookes University |
| **Karen Bartlett** | Learning Support Services Manager for West Berkshire Local Authority. Oversight of Advisory Services and support to the Specialist Resource Provisions attached to mainstream schools |
| **Dorothy Bishop** | Professor of Developmental Neuropsychology, University of Oxford  |
| **Lia Castiglione** | Head of Training at Communicate-ed, an educational training organisation, and an independent specialist teacher assessor. SASC Board member |
| **Kelly Challis** | on behalf ofThe Driver Youth Trust |
| **Dr Margaret Crombie** | Specialist teacher-assessor and member of the Cross Party Group of the Scottish Parliament on Dyslexia and is an honorary life member of Dyslexia Scotland  |
| **Dr James Gilchrist** | Former academic in optometry & vision science, professional interest/expertise in vision, including role of vision in reading |
| **Dr Jenny Guise** | Practitioner Psychologist, a member of the HCPC, and holds a current APC. Founder and Director of Dysguise Ltd. Member of the Cross Party Group of the Scottish Parliament on Dyslexia and a member of the British Dyslexia Association Accreditation Board  |
| **Anwen Jones** | Specialist Teacher Assessor. |
| **Armande Fryatt** | Specialist teacher assessor. Member of STEC, SASC’s SpLD Test Evaluation Committee. |
| **Lynn Greenwold OBE** | Chair SASC. Chair Professional Association of Teachers of Students with Specific Learning Difficulties PATOSS |
| **Katherine Kindersley** | Board member SASC**.** Director: Dyslexia Assessment and Consultancy |
| **Amanda Kirby** | EmeritusProfessor of Developmental Disorders at the University of South Wales, Newportand honorary Professor at the University of Cardiff |
| **Dr Philip Kirby** | Lecturer in Social Justice, School of Education, Communication and Society King’s College, London |
| **Pete Jarrett** | Chair of the BDA Dyscalculia Committee and member of the SASC working group on dyscalculia |
| **Linda Kerr, Anna Doherty, Basia McDougal, Briony Jenkins, Teresa Determann, Alan Waugh, Joan Caves, Jennie Guise, Lorna Harrison, Lis Johnstone, Heather Berrisford, Julie Ross, Heather Mair, Gerald McLaughlin** | all ofProfessional Assessors of SpLD in Scotland (PASS), who submitted a joint response |
| **Ros Lehany** | Director ADSHE Ltd (Association of Dyslexia Specialists in Higher Education). Partner Dyslexia Solutions LLP |
| **Mark Loveday** | Head of Service Chadsgrove School Support Services |
| **Dr Nancy Mather** | Associate Professor Disability and Psychoeducational Studies at the University of Arizona |
| **Jen McDermott** | Independent assessor. Board member SASC, representing the Professional Association of Teachers of Students with Specific Learning Difficulties (PATOSS) |
| **Cathy McGee** | CEO of Dyslexia Scotland  |
| **Mike Gibson** | Education Advisor Dyslexia Scotland |
| **Anne McLoughlin** | Senior Lecturer Education, Dyslexia and Dyscalculia Course Leader, Edge Hill University |
| **Rachael McMullen** | Board member SASC. Head of Dyslexia Support, Helen Arkell Charity |
| **Sally-Ann Morrison** | Praxis Educational Development and Assessment Services. Specialist SpLD Identification, Training and Support |
| **Dr Julie Ross** | SFHEA, AMBDA, ADSHE QA, PhD, PGDip Dyslexia and Literacy, Cert Ed, PGDip Sculpture, BA Hons |
| **Rachel Simpson** | Independent assessor. Chair of SASC’s SpLD Test Evaluation Committee (STEC) |
| **Maggie Snowling CBE, FBA, FMedSci** | President and Honorary Professor in the Department of Experimental Psychology, St John’s College, Oxford University  |

## SASC ONLINE CONSULTATION

A **third consultation phase**, in April 2022, will invite responses, via a questionnaire, from assessors and practitioners, including the SASC membership, relating to the preliminary draft of the Report. Final amendments will be made following this consultation and agreed by the SASC Board in May 2022.

1. <https://www.gov.uk/government/consultations/send-review-right-support-right-place-right-time> [↑](#footnote-ref-1)
2. [www.sasc.org.uk](http://www.sasc.org.uk) See Downloads [↑](#footnote-ref-2)
3. See [**APPENDIX 2**](#Appendix_2)for reference to the different terminology used in Scotland and to important policy and practice differences across the devolved nations. [↑](#footnote-ref-3)
4. <http://www.essexlocaloffer.org.uk/literacy-difficulties-information-for-essex-parents/> [↑](#footnote-ref-4)
5. Government sponsored rapid evidence reviews (2020) reach the same conclusion: <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/926052/specific-learning-difficulties-spld-cst-report.pdf> [↑](#footnote-ref-5)
6. In Canada and the USA psychologists are usually constrained by fairly rigid criteria for the identification of specific learning disorders e.g. in reading. At university level this necessitates attainment scores at the 16th percentile or below. [↑](#footnote-ref-6)
7. See [**APPENDIX 2**](#Appendix_2) for the different situation in Scotland. [↑](#footnote-ref-7)
8. See [**APPENDIX 2**](#Appendix_2) for the different situation in Scotland. [↑](#footnote-ref-8)
9. <https://www.sasc.org.uk/Downloads.aspx> [↑](#footnote-ref-9)
10. Assessment Through Teaching and Response to Intervention models vary but essentially the guiding principle here is that the assessment system is critical in providing teachers with reliable data that are easily interpreted and used to make instructional decisions, i.e. *what* and *how* to teach an individual child to improve, for example, their literacy attainment. [↑](#footnote-ref-10)
11. bioRxiv 2021.11.04.466897; doi: <https://doi.org/10.1101/2021.11.04.466897> [↑](#footnote-ref-11)
12. See Dorothy Bishop <https://royalsocietypublishing.org/doi/10.1098/rspb.2014.3139> [↑](#footnote-ref-12)
13. <https://www.cne.psychol.cam.ac.uk/staff/usha-goswami> [↑](#footnote-ref-13)
14. [www.sasc.org.uk](http://www.sasc.org.uk) Downloads [↑](#footnote-ref-14)
15. STEC is a sub-committee of the SPLD Assessment Standards Committee (SASC). Its purpose is to provide guidance on assessment materials. Its responsibilities include:

	* To review and evaluate assessment materials on a regular basis.
	* To maintain a list of approved assessment materials for SpLDs. See [www.sasc.org.uk](http://www.sasc.org.uk)
	* To engage with the publishers and distributors of assessment materials.    [↑](#footnote-ref-15)
16. Wechsler Individual Achievement Test (WIAT-III), Wide Range Achievement Test (WRAT5), Academic Achievement Battery (AAB), Woodcock Johnson Reading Mastery Tests (WRMT-III), Feifer Assessment of Reading (FAR). See References for full details. [↑](#footnote-ref-16)
17. The DSM5 definition of reading disability also notes that a good indicator is ‘low academic achievement for age or average achievement that is sustainable only by extraordinarily high levels of effort or support’ (p. 69).’ [↑](#footnote-ref-17)
18. *‘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, 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 co-ordination, 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.’* (Rose Report p. 10). [↑](#footnote-ref-18)
19. See <https://www.jcq.org.uk/exams-office/access-arrangements-and-special-consideration/> (Accessed December 2021) [↑](#footnote-ref-19)
20. English as an Additional Language (EAL)/ English as a Second Language (ESL) [↑](#footnote-ref-20)
21. In the 1990s Stanovich gave a full critique of the **IQ-Achievement discrepancy** model but it lingers on in some assessment practice. See, for example: Stanovich, K. E. (1991) ‘Conceptual and Empirical Problems with Discrepancy Definitions of Reading Disability’, *Learning Disability Quarterly*, 14(4), pp. 269–280. doi: [10.2307/1510663](https://doi.org/10.2307/1510663). [↑](#footnote-ref-21)
22. <https://dyslexiaida.org/dsm-5-changes-in-diagnostic-criteria-for-specific-learning-disabilities-sld1-what-are-the-implications/> (Accessed 18/09/2021) [↑](#footnote-ref-22)
23. In DSM-5 there is a requirement to provide information on severity e.g. mild, moderate or severe. [↑](#footnote-ref-23)
24. <https://www.ids-2.com/> [↑](#footnote-ref-24)
25. <https://educationelephant.ie/product/woodcock-johnson-iv-tests-of-cognitive-abilities/> [↑](#footnote-ref-25)
26. <https://www.pearsonassessments.com/store/usassessments/en/Store/Professional-Assessments/Cognition-%26-Neuro/Gifted-%26-Talented/Wechsler-Intelligence-Scale-for-Children-%7C-Fifth-Edition-/p/100000771.html> [↑](#footnote-ref-26)
27. Rapid automised naming/ phonological awareness/ processing speed/ working memory [↑](#footnote-ref-27)
28. <https://www.gov.uk/government/publications/send-code-of-practice-0-to-25> (accessed 22/11/2021) [↑](#footnote-ref-28)
29. [**https://www.ethnicity-facts-figures.service.gov.uk/education-skills-and-training/7-to-11-years-old/reading- attainments-for-children-aged-7-to-11-key-stage-2/latest**](https://www.ethnicity-facts-figures.service.gov.uk/education-skills-and-training/7-to-11-years-old/reading-%20attainments-for-children-aged-7-to-11-key-stage-2/latest)

[**https://schoolsweek.co.uk/gcse-results-2019-english-literature/**](https://schoolsweek.co.uk/gcse-results-2019-english-literature/)

 <https://literacytrust.org.uk/parents-and-families/adult-literacy/> all accessed 26/01/2022 [↑](#footnote-ref-29)
30. <https://explore-education-statistics.service.gov.uk/find-statistics/national-pupil-projections> [↑](#footnote-ref-30)
31. <https://www.gov.uk/government/publications/send-code-of-practice-0-to-25> [↑](#footnote-ref-31)
32. <https://www.sec-ed.co.uk/best-practice/assess-plan-do-review-the-graduated-approach-to-sen/> [↑](#footnote-ref-32)
33. <https://www.tes.com/news/everything-you-need-know-about-ehcps> accessed 17/05/2021 [↑](#footnote-ref-33)
34. <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwj8la2X5O_yAhWKQUEAHQVgAc4QFnoECDYQAQ&url=https%3A%2F%2Fassets.publishing.service.gov.uk%2Fgovernment%2Fuploads%2Fsystem%2Fuploads%2Fattachment_data%2Ffile%2F942628%2FTribunals_SEND_19-20_Tables.ods&usg=AOvVaw29PPJ_akkzZOBcgAMrdu74> [↑](#footnote-ref-34)
35. <https://committees.parliament.uk/committee/203/education-committee/news/114698/special-educational-needs-and-disabilities-send-education-committee-publishes-government-response-to-report/> Accessed 31/10/2021 [↑](#footnote-ref-35)
36. <https://publications.parliament.uk/pa/cm201919/cmselect/cmeduc/20/2003.htm> Accessed 17/05/2021 [↑](#footnote-ref-36)
37. <https://www.gov.uk/government/organisations/standards-and-testing-agency> [↑](#footnote-ref-37)
38. <https://www.gov.uk/government/publications/key-stage-2-tests-access-arrangements> (Accessed December 2021) [↑](#footnote-ref-38)
39. See <https://www.jcq.org.uk/exams-office/access-arrangements-and-special-consideration/> (Accessed September 2021) [↑](#footnote-ref-39)
40. <https://www.gov.uk/government/statistics/access-arrangements-for-gcse-as-and-a-level-2019-to-2020-academic-year> [↑](#footnote-ref-40)
41. <https://www.bbc.co.uk/news/education-38923034> [↑](#footnote-ref-41)
42. Essex County Council’s publically stated position is, ‘that the term dyslexia is not particularly helpful in our goal of meeting the needs of all pupils with literacy difficulties in Essex.’ [↑](#footnote-ref-42)
43. <https://publications.parliament.uk/pa/cm200506/cmselect/cmeduski/478/47802.htm> [↑](#footnote-ref-43)
44. <https://senpolicyresearchforum.co.uk> [↑](#footnote-ref-44)
45. <https://senpolicyresearchforum.co.uk/wp-content/uploads/ASD-paper-Dec-21.pdf> [↑](#footnote-ref-45)
46. Reported in The Guardian 8th September 2021 <https://www.theguardian.com/education/2021/sep/08/schools-in-england-forced-to-cut-support-for-special-needs-pupils> [↑](#footnote-ref-46)
47. <https://www.gov.uk/government/publications/national-professional-qualifications-npqs-reforms/national-professional-qualifications-npqs-reforms> [↑](#footnote-ref-47)
48. <https://www.gov.uk/government/consultations/send-review-right-support-right-place-right-time> [↑](#footnote-ref-48)
49. <https://www.gov.uk/government/publications/opportunity-for-all-strong-schools-with-great-teachers-for-your-child> [↑](#footnote-ref-49)
50. Specialist teachers may only occasionally also have a role as school SENCO….Special Educational Needs Coordinator. [↑](#footnote-ref-50)
51. <https://educationendowmentfoundation.org.uk> [↑](#footnote-ref-51)
52. The discussion of this this product should not be viewed as endorsement by SASC. It has been included as it provides a useful example of the issues involved in the provision of such materials and technologies. [↑](#footnote-ref-52)
53. <https://educationendowmentfoundation.org.uk/projects-and-evaluation/projects/lexia> accessed March 2022 [↑](#footnote-ref-53)
54. <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/926052/specific-learning-difficulties-spld-cst-report.pdf> [↑](#footnote-ref-54)
55. [**Evaluation of disabled students' allowances - GOV.UK** *https://www.gov.uk/government/publications/evaluation-of-disabled-students-allowances-dsas*](file:///C%3A%5CUsers%5CCaroline%5CAppData%5CLocal%5CTemp%5CEvaluation%20of%20disabled%20students%27%20allowances%20-%20GOV.UK%20https%3A%5Cassets.publishing.service.gov.uk%20%E2%80%BA%20file%20%E2%80%BA%20Ev) [↑](#footnote-ref-55)
56. <https://researchbriefings.files.parliament.uk/documents/CBP-8716/CBP-8716.pdf> [↑](#footnote-ref-56)
57. <https://www.theguardian.com/inequality/2017/jun/15/reading-for-freedom-life-changing-scheme-dreamt-up-by-prison-pen-pals-shannon-trust-action-for-equity-award> [↑](#footnote-ref-57)
58. <https://www.gov.uk/government/publications/prison-education-a-review-of-reading-education-in-prisons> Accessed 26/03/2022 [↑](#footnote-ref-58)
59. This highlights the problem with support for specific learning difficulties in Higher Education being tied to DSAs. Although what counts as a disability is, in the final instance, a legal decision, to be in receipt of the DSA is, implicitly, to be defined as a ‘disabled student.’ [↑](#footnote-ref-59)
60. <http://addressingdyslexia.org/supporting-and-identifying-learners-needs> [↑](#footnote-ref-60)
61. <http://addressingdyslexia.org/> [↑](#footnote-ref-61)