Contents

Introduction

This guidance provides information to local authorities (LAs) and educational providers on how to identify effective screening, assessment and intervention methods that are currently available for learners with specific learning difficulties (SpLD). This will enable LAs and teaching practitioners to ensure greater consistency in both identifying learners with SpLDs and applying appropriate interventions to help meet their learning needs.

The guidance includes descriptors for each SpLD; basic information on identifying a learner with a SpLD; the rationale for having a process in place and guidance on choosing screening assessment and intervention approaches.

Key findings from an audit of SpLD provision in Wales

In October 2014, the Welsh Government commissioned a rapid audit of LA arrangements for identifying and supporting learners with SpLDs in Wales. This rapid audit was not meant to provide a definitive picture of LA arrangements but an indicative understanding of approaches to SpLD across Wales.

The audit involved a brief survey of LA approaches and was undertaken over a six-week period. The key findings from this audit are highlighted below.

Variability
There is wide evidence of variability in practices, with LAs operating very differently to one another. There are few LAs who have a coherent cross-platform and integrated approach that encompasses all conditions, at all age levels. There is also variability with regard to processes from identification through to management.

In general there has been a greater focus placed on literacy and dyslexia. In some areas of Wales there are well-designed systems for the identification and support for speech and language impairments (SLIs) as well. There are several LAs who have developed developmental coordination disorder (DCD – also known as dyspraxia) pathways, but with very few LAs having attention deficit hyperactivity disorder (ADHD) and dyscalculia procedures in place.

Duplication of work is evident, with examples of LAs developing their own tools, resources, checklists and local protocols and pathways.

Time frames, from identification to assessment, vary widely across Wales for the different SpLDs. Among the reasons for this is the caseload of LA staff and staff changes, e.g. many LAs no longer having a centralised team of advisory specialist teachers.

Collaborative working
There is evidence of collaboration between LAs in all areas of SpLDs in Wales and the presence of some well-developed graduated pathways between education and health in ADHD, DCD and SLI.

Terminology and roles
There is some evidence that the term SpLD is sometimes used interchangeably to mean dyslexia. This may cause some confusion for parents/carers and educators in terms of what is being offered and the processes being followed.

In different LAs, a range of professionals will have responsibility for different aspects of SpLD provision and there is little consistency. For example, educational psychologists (EPs) may be the first line of referral for some conditions in one LA, and in other LAs it may be a specialist teacher's role.

Universal screening for SpLDs
Survey responses suggest that there may be some confusion as to how the term universal screening is understood or is being used. Different examples of tools were given although some were neither assessment nor screening tools. There was generally a greater focus on screening universally for literacy difficulties than in other areas. However some LAs indicated that universal screening was a less useful approach and were taking more of a graduated approach using triggers of parent/carer/teacher concern, presence of developmental delay or failure to progress compared with peers, as their markers for further screening.

Screening tools, assessment tools and intervention methods
There are more than 100 different screening and assessment tools reported as being used within LAs. Intervention approaches also varied greatly. There was little consistency across LAs in the screening/assessment tools and intervention methods being used.

There was little information provided by LAs on formal approaches for ADHD, dyscalculia and to some extent DCD, at all ages and stages.

Monitoring and quality assurance (QA) systems
QA monitoring systems were reported to be present and there were more systems in place for dyslexia and SLI than in other SpLD areas.

Some LAs reported using Pupil Level Annual School Census (PLASC) data, and others had some locally developed monitoring systems. Some LAs reported having service level agreements (SLA) with outcome measures with health professionals.

Descriptors and information on SpLDs

Terms used to describe SpLDs vary from LA to LA and can cause confusion for parents/carers and teaching practitioners alike. This document and the links from it provide some statements describing each SpLD and hope to encourage the use of a common and consistent terminology.

Full descriptors of SpLD can be found in the *Specific learning difficulties framework* (2015) at http://learning.gov.wales/resources/collections/spld-framework?lang=en.

Attention deficit hyperactivity disorder (ADHD)
ADHD is the umbrella term to describe a condition that affects individuals' attention, concentration, impulsivity, activity levels and memory (ADD is included in this).

Developmental coordination disorder (DCD)
Developmental coordination disorder (DCD), also known as dyspraxia in the UK, affects fine motor, gross motor coordination and balance skills.

Dyscalculia
Dyscalculia is a condition that primarily affects the ability to acquire arithmetical skills.

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

Speech, language and communication difficulties
Specific language impairment (SLI) is a developmental disorder that may affect the learner's ability to speak, understand, and communicate effectively.

Some basic facts about SpLDs

SpLD is an umbrella term used to cover a range of difficulties. SpLDs occur across a range of intellectual abilities. Each condition is also an umbrella term representing a range of characteristics. For example, one learner with dyslexia may have reading and spelling difficulties, whereas another may have reading comprehension and writing composition difficulties.

No individual has to have **all** the characteristics in order to gain a diagnosis but they must have a sufficient number to meet a given criteria. Other factors may result in two learners with the same 'label', e.g. both having ADHD, presenting differently. At home one learner could have help with their organisation and so learn from this modelling; and another have little support and so less practice. Each learner with a SpLD may also have different patterns of co-occurrence with other SpLDs, affecting how they show their difficulties in and out of school. Presentation and degree of impact will also vary from age to age, and may be affected by the level of support given and task demands, e.g. complexity of work and time to complete it.

Some learners will be at a higher risk of having a SpLD, and this is particularly true of those in pupil referral units (PRUs) and those out of education[1] [2]. There is evidence of higher rates of ADHD, language and literacy difficulties in this group compared with a mainstream setting[3]. These learners are also at a higher risk longer term of becoming NEET (not in education, employment or training) and some, may also be at higher risk of entering the criminal justice sector[4].

By spotting the signs early, providing appropriate support and monitoring for change, we can help every learner to become the best they can be.

The five c's

SpLDs are all:

- **common**
- on a **continuum**
- have **consequences**
- are **chronic**
- **co-occur**.

- **Common** – SpLDs are present in up to 15 per cent of the population. This means that in every classroom there is likely to be at least one or two learners

[1] www.wales.gov.uk/statistics-and-research/pupils-educated-other-than-school/?lang=en
[2] Parker, C, Whear, R, Ukoumunne, OC, Bethel, A,Thompson-Coon, J, Stein, K, and Ford, T (2014) 'School exclusion in children with psychiatric disorder or impairing psychopathology: a systematic review' in *Emotional and Behavioural Difficulties* (Routledge, 2014) DOI:10.1080/13632752.2014.945741
[3] Place, M, Wilson, J, Martin, E, and Hulsmeier, J (2000) 'The Frequency of Emotional and Behavioural Disturbance in an EBD School' in *Child Psychology and Psychiatry Review*, 5(2): 76–80 (2003)
[4] www.barrowcadbury.org.uk/wp-content/uploads/2011/04/YPIF-Young-Adults-in-CJS-ETE-FACT-FILE-2011.pdf

with one or more SpLD. In some settings the rates may be much higher such as in PRUs.

- **Continuum** – There is no specific 'cut-off' for any SpLD. Each condition is an umbrella term representing characteristics that are on a continuum. Different learners are affected by varying degrees. Some people prefer to see them on a spectrum. Experts in the field have for more than 10 years described dyslexia and SLI as being on a continuum rather than as separate and discrete conditions[5].

- **Consequences** – SpLDs often impact on a learner's potential to participate fully in everyday activities in their educational setting and at home. Self-esteem, low confidence and social isolation are often seen as well as other specific secondary consequences related to the different learning difficulties, e.g. weight gain and lack of fitness have been noted in some as secondary consequences of DCD.

- **Chronic** – There is extensive evidence that SpLDs are lifelong conditions and the impact and challenges for some continue into adulthood and impact on educational outcomes and employability.

- **Co-occur** – Other names for this are overlap, or comorbidity. There is extensive evidence to show that if you have one SpLD you are likely to have other SpLDs as well, to a lesser or greater degree. All SpLDs overlap with each other and also with other conditions including autism spectrum disorder (ASD), anxiety and depression. Some SpLDs co-occur more with some conditions than others, e.g. ADHD can co-occur with behavioural difficulties, oppositional defiant disorder and conduct disorder.

The Rose report[6] on dyslexia (2009) talks about co-occurring difficulties, and makes the important point:

> '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.'

NICE guidelines for ADHD (2008)[7] reiterate this also and state that:

> 'Symptoms of ADHD can overlap with symptoms of other related disorders, and ADHD cannot be considered a categorical diagnosis. Therefore care in differential diagnosis is needed. Common coexisting conditions in children with ADHD are disorders of mood, conduct, learning, motor control and communication, and anxiety disorders; in adults they include personality disorders, bipolar disorder, obsessive-compulsive disorder and substance misuse.'

[5] Bishop, DVM and Snowling, MJ (2004) 'Developmental Dyslexia and Specific Language Impairment: Same or Different?' in *Psychological Bulletin* 130(6) 858–886 (2004)
[6] Rose, J (2009) *Identifying and Teaching Children and Young People with Dyslexia and Literacy Difficulties* (DCSF, 2009)
[7] www.nice.org.uk/guidance/cg72

Some specific examples of co-occurrence include work from Canada by Kaplan et al.[8], undertaken nearly 20 years ago. The authors showed that in a population of learners with DCD, ADHD and dyslexia:

- nearly one in four of those with one SpLD were found to have all three
- 10 per cent had ADHD **and** DCD
- 22 per cent had dyslexia **and** DCD.

In Wales, Kirby et al.[9] showed that learners with a diagnosis of either ADHD or DCD were likely to have the other condition in 30–40 per cent of cases. The increased risk of anxiety has also been noted in ADHD, SLI and DCD for example[10].

Other terms used to describe SpLDs

These terms may be used by some health professionals and others and include:

- developmental disorder
- neurodevelopmental disorders
- neurodiversity.

Additionally, terms that may be mentioned in relationship to SpLDs include[11]:

- **typical development**, which in the past has been called 'normal' development and is what is expected generally of the majority of learners

- **atypical development**, which means that the learner's development is different from what most learners of a similar age and experience should be doing in an area of development, e.g. motor skills, cognition, language

- **developmental delay**, which usually means the condition in which a learner is not developing and/or achieving skills according to the expected time frame (a chronological delay in the appearance of normal developmental milestones achieved during infancy and early childhood). This may be caused by biological, psychological or environmental factors

- **global delay**, which means delay in development in more than one domain. This may be associated with intellectual impairment or a learning disability and is different from SpLD

[8] Kaplan, B, Wilson, B, Dewey, D and Crawford, S (1998) 'DCD may not be a discrete disorder in *Human Movement Science* (Elsevier Science, 1998) 17: 471–490

[9] Kirby, A, Salmon, G and Edwards, L (2007) 'Should Children with ADHD be Routinely Screened for Motor Coordination Problems? The Role of the Paediatric Occupational Therapist' in *British Journal of Occupational Therapy* (SAGE, 2007) 70 (11), 483–486

[10] Conti-Ramsden, G and Botting, N (2008) **'**Emotional health in adolescents with and without a history of specific language impairment (SLI)' in *Journal of Child Psychology and Psychiatry* (2008) 49(5): 516–25

[11] http://learning.wales.gov.uk/resources/learningpacks/mep/module2/typical-and-atypical-development/typical-development-milestones/?lang=en#/resources/learningpacks/mep/module2/typical-and-atypical-development/atypical-development-what-is-meant-by-delay-and-disorder/?lang=en

- **disorder** – a learner who has a disordered developmental profile has gaps in their attainment of developmental milestones. Progress occurs in a non-sequential pattern. Sometimes this may be referred to as a 'deviant' pattern of development.

Identifying SpLDs

The trigger for identifying SpLDs can come from a number of differing routes.

Developmental delay – The learner may show some delay in their development (in some cases this may have been recognised in the early years). The Early Years Development and Assessment Framework (EYDAF) contains material that can assist with charting learners' progress, especially using the Foundation Phase Profile (FPP)[12] which aims to assess learners' abilities and development in four Areas of Learning:

- Personal and Social Development, Well-Being and Cultural Diversity
- Language, Literacy and Communication Skills
- Mathematical Development
- Physical Development.

The FPP is accompanied by guidance which describes a usual developmental pathway on a range of skills as well as indicators which suggest that further investigation of a learner's needs might be necessary.

Parental and teacher concerns – These can be an important trigger. A parental concern is important to recognise, but it may not always indicate specifically where the difficulties lie. Behaviour change at home, for example, may indicate a learner having difficulties with reading or attending in school.

Progression in literacy and numeracy – Not all learners will be identified in their early years. The National Literacy and Numeracy Framework (LNF)[13] provides a structure to support progression. This is used to provide detailed next steps for each learner and can be used as a means of identifying those learners that seem not to be progressing as expected compared to their age-matched peers.

Increased skills demands – Tipping points for identification may also be related to increased task and skill demands or a change in environment. Later identification, e.g. at secondary school, may in some cases be because the learner is having to work at a more advanced level and may not have the skills to cope, or has to be a more independent learner and has difficulties being self-organised, such as having to move between classes and plan and complete their assignments to time. This may be alongside reduced scaffolding and support, at home and school compared with primary school, as there is an expectation the learner being older can manage with less.

[12] www.wales.gov.uk/topics/educationandskills/earlyyearshome/foundation-phase/foundation-phase-profile/?lang=en
[13] http://learning.wales.gov.uk/resources/browse-all/nlnf/?lang=en

Presence of other SpLDs – If the learner has already been identified with other areas of challenge or another SpLD, e.g. they have emotional or behavioural challenges resulting in exclusion or placement in a PRU, or already have been identified as having dyslexia (as SpLDs co-occur frequently), this should act as a prompt to consider the other SpLDs.

There will always be a few learners that cause some immediate concern and we sometimes call these '**red flags**'. These are concerns that may flag up a specific condition such as DCD straight away, or alert you to the need for a referral for expert advice as you are worried about the learner's health or well-being or that the characteristics do not fit into a typical picture of a learner with a SpLD.

Examples of **red flags** could be:

- speech delayed or difficult to understand by adults
- the learner cannot use the toilet or feed themselves without assistance
- the learner has difficulty sitting still to attend to a story for more than a few minutes
- falling over or knocking into other learners
- deterioration in motor skills, e.g. was able to run and now cannot very well.

Be aware that delay in some learners may be related to:

- **lack of opportunity/experience related to home life**. This could be the case with young learners who have not attended pre-school, for example
- **avoidance of an activity**, e.g. a learner that finds it hard to attend in class may have less practice at a skill such as reading; a learner that recognises they have difficulties may then avoid practising that skill, e.g. a learner who finds ball skills difficult will avoid playing in the playground and so practice less
- **lack of understanding or attention**. This could be related to the learner having English as an Additional Language (EAL), and not understanding fully what is being asked of them
- **prematurity in younger learners**. There will be some learners that were born premature and this may impact on their learning[14].

The distinguishing factors that need to be considered are that the difficulties are not due to general delay or caused by other reasons such as a specific medical or genetic condition.

[14] Odd, DE, Emond, A, Whitelaw, A (2012) 'Long-term cognitive outcomes of infants born moderately and late preterm' in *Developmental medicine and child neurology* (2012) 54(8): 704–9

Key approaches to identification, assessment and support for learners with SpLDs

There is good evidence from SpLD research that having clear guidelines, policies and procedures from the point of identification to supporting the learner can increase the quality of provision and can clarify the steps needed to be taken at each stage[15] [16].

The report *Research into dyslexia provision in Wales* (Welsh Government, 2012) [17] emphasises that:

> 'Children with overlapping learning disabilities may need support from several professional groups across agencies. This was recognised by the Special Educational Needs Code of Practice and the National Service Framework for Children (2006) which advocate multi‐disciplinary, joint agency working to provide seamless services to children and families.'

By gaining consensus and delivering a coherent plan together, this can not only increase confidence in delivery of services but improve outcomes for a wide range of learners in your educational setting. Additional information regarding national and international guidelines, pathways and procedures for SpLD, plus an exemplar procedure/pathway, are explored in this section.

One part of understanding the learner is capturing information to understand more about their difficulties. Choosing appropriate and robust screening and assessment tools is important for a number of reasons. It can give you confidence in understanding what the difficulties are and should help to decide what intervention should be put in place. However there can be a wide array of tools available and already in use. Making a choice which one to choose requires a careful assessment of a number of factors including how robust the tool is, whether you are confident in using it, and ultimately whether it helps to guide you.

In order to help, there are a series of appendices in the document. This includes a list on what to consider when choosing a screening or assessment tool (see Appendix 2) , a glossary to understand some of the terms used relating to screening and assessment (see Appendix 3), and some answers to frequently asked questions relating to this (see Appendix 4). There is also a checklist of items to consider when choosing an intervention and to check for progress (see Appendix 5).

[15] Salmon, G, Cleave, H and Samuel, C (2006) 'Development of multi-agency referral pathways for attention-deficit hyperactivity disorder, developmental coordination disorder and autistic spectrum disorders: reflections on the process and suggestions for new ways of working' in *Clinical Child Psychology and Psychiatry* (SAGE, 2006) 11(1): 63–68

[16] Salmon, G and Kirby, A (2008) 'Schools: Central to Providing Comprehensive CAMH Services in the Future?' in *Child and Adolescent Mental Health* (2008) 13(3): 107–114

[17] www.wales.gov.uk/docs/caecd/research/120824-dyslexia-provision-literature-review-en.pdf

Consensus, guidelines, pathways, and procedures
LAs and educational settings can benefit from consistent approaches based on an evidence base of best practice. Many LAs already have established processes, protocols or pathways in place to follow. This can help educational settings, health services and the LA know what to expect and when to undertake an action.

The processes and pathways are often created by experts and practitioners at international, national and local levels. They should include the principles of best practice that are known and have been obtained from current research. Consensus is gained when there is agreement on these processes and actions. Regular review of guidelines is also important to ensure they remain up to date.

See Appendix 1 for an example of a pathway.

What is a consensus?
Consensus decision making is a group decision-making process that seeks the consent of all participants. Consensus may be defined professionally as an acceptable resolution, one that can be supported, even if not the 'favourite' of each individual. Agreed guidelines often come from consensus. In the field of SpLDs there have been a number of consensus meetings which have resulted in guidelines, e.g. for DCD and for ADHD.

What are guidelines, pathways and protocols?
Guidelines generally aim to help professionals and parents/carers to make the best decisions about intervention or management for a particular condition or situation. The guidelines are typically written in statement form by a reputable organisation. The authors of guidelines review the research literature and take advice from experts to gather the current evidence on which to base the recommendations in a guideline. There is evidence that some LAs have taken and modified these for local usage.

The following are some examples of Key SpLD guidelines'.

ADHD
In the UK there are two bodies that have reported guidelines. National Institute for Health and Clinical Excellence (NICE) have set guidelines for the assessment and diagnosis of ADHD for the UK[18].. Scottish Intercollegiate Guidelines Network (SIGN)[19] have set guidelines for the assessment and diagnosis of ADHD for Scotland.

Dyslexia
There have been two recent reports with guidelines for the screening, assessment and intervention of dyslexia: in England, the Rose report[20]; and from Wales[21], a commissioned review by Welsh Government into dyslexia provision in Wales, including guidance on screening, assessment and interventions accepted as best practice.

[18] www.nice.org.uk/guidance/cg72
[19] www.sign.ac.uk/guidelines/fulltext/112/
[20] Rose, J (2009) Identifying and Teaching Children and Young People with Dyslexia and Literacy Difficulties (DCSF, 2009)
[21] http://gov.wales/statistics-and-research/research-dyslexia-provision/?lang=en

Dyscalculia
There are no formal international guidelines for dyscalculia. There has been a recent review in the British Dyslexia Association (BDA) handbook (2014)[22]. Steve Chinn, a UK expert in mathematics difficulties, has recently edited and published *The Routledge International Handbook of Dyscalculia and Mathematical Learning Difficulties* (Routeledge, 2014)[23] which contains 30 chapters from experts around the world and voluntary sector organisations.

Developmental coordination disorder (DCD)
The most recent international guidelines to be published have been from the scoping review by Camden et al. in 2014[24], along with amended guidelines for the UK, which originated from work from the European Academy of Childhood Disabilities (EACD)[25]. DCD UK guidelines were published following UK consensus meetings in 2012[26].

Speech and language impairments
Royal College of Speech and Language Therapists (RCSLT) have set guidelines for speech and language assessment and diagnosis. However, these are more generic in description rather than specific to SLI/SLCN and refer to 'codes of pathways' for SEN provision. They have also produced a *Resource Manual for Commissioning and Planning Services for SLCN* (RCSLT, 2009)[27].

The Communication Trust has produced a site with a Speech, Language and Communication Framework which lists all the skills and knowledge that everyone working with learners need to support the communication development of all learners and those with speech, language and communication needs (SLCN)[28].

Pathways
The pathway is the detail in what is undertaken at each stage so the guidelines can be actualised. What is clear from the exemplars is that there is a need once you have defined the pathway to provide the appropriate tools and resources for the different participants in order to deliver it.

When considering developing pathways and processes between education and health it can be useful to look at some examples of both national and local 'care pathways' for ADHD, DCD and SLI. This can provide examples of tools, etc., that have already been developed and in some cases could be adapted for local use.

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[22] www.bdadyslexia.org.uk/about-dyslexia/schools-colleges-and-universities/dyscalculia.htmlhttp://scotens.org/sen/resources/dyslexia_leaflet_maths.pdf
[23] www.routledge.com/books/details/9780415822855/
[24] Camden C, Wilson B, Kirby A Sugden, D and Missiuna, C (2014) 'Best practice principles for management of children with developmental coordination disorder (DCD): results of a scoping review' in *Child: Care, Health and Development* (2014) 41(1) 147–159.
[25] European Academy of Childhood Disabilities (EACD) (2011) *EACD Recommendations: Definition, Diagnosis, Assessment and Intervention of Developmental Coordination Disorder (DCD)* (EACD, 2011) www.eacd.org/publications.php
[26] www.movementmattersuk.org/dcd-dyspraxia-adhd-spld/uk-dcd-consensus/pocket-guide-to-uk-dcd-consensus.aspx
[27] www.rcslt.org/speech_and_language_therapy/commissioning/aac_plus_intro
[28] www.communicationhelppoint.org.uk

The term ‘care pathway’ is used more in health care services, but has also been discussed when describing multiagency pathways. The following are some example pathways in practice.

NICE guidelines for ADHD – These provide a pathway[29] once the learner has been identified as potentially having ADHD.

ADHD guidelines In Wales – ADHD, ASD and DCD multiagency pathways were developed in Swansea, and reported by Salmon, Cleave and Samuels in 2006, and the ADHD guidelines were then revised in 2010[30]. This describes the route from education into health care provision and the role of the different professionals. They emphasise the need for individual planning and also highlight key decision points.

The Wolverhampton ADHD pathway – This was devised by a multiagency group which included education, social care, child and adolescent mental health services (CAMHS), and paediatrics. They have developed an ADHD diagnostic pathway. Learners are referred from a variety of sources to specialist paediatric or CAMHS. The school’s EP initially asks the class teacher about the learner. If there are concerns, the psychologist conducts a structured observation of the learner, comparing the time on task, distraction, or impulsiveness with two reference learners in the same class. This provides an efficient screening before more detailed assessment can be made of learners for whom there are concerns. The multiagency group discusses complex cases. An important point has come from a review of these processes highlighting that many of the learners referred for ADHD had other conditions and again demonstrated ‘the overlapping nature of developmental disorders and the need for an inter-professional approach’.

Worcestershire SLCN Pathway[31] – This describes a process of identification and support for those learners with SLCN. The pathway includes a package of tools and information.

- Tools to help recognise and identify children and young people with SLCN.
- Tools to help practitioners audit current practice and skills.
- Guidance on creating and maintaining a ‘communication-friendly’ environment.
- Information for parents and carers.
- Tools to promote the active participation and voice of children and their parents/carers.
- Guidance and links to training and workforce development.
- A clear route for referral to specialist services.
- Signposts to sources of further information and support.

Derbyshire County Council Integrated Pathway for SCLN (2013)[32] – In their document they describe a process from early years along with training resources, etc., required to deliver the services.

[29] http://pathways.nice.org.uk/pathways/attention-deficit-hyperactivity-disorder#path=view%3A/pathways/attention-deficit-hyperactivity-disorder/attention-deficit-hyperactivity-disorder-in-children-and-young-people.xml&content=view-index
[30] www.swanseagfl.gov.uk/inclusion/documents/adhd/ADHDenglish2010.pdf
[31] www.worcestershire.gov.uk/slcnpathway
[32] www.speech.derbys.nhs.uk/documents/topapril2013slcnpathwaydoc.pdf

Using appropriate screening and assessment tools

There are hundreds of different screening and assessment measures being used across Wales to assist the teaching workforce, psychologists, health professionals and others to capture and help to document a learner's profile of strengths and challenges. The variety can result in some inconsistent approaches and some confusion over what are the most appropriate tools to use.

Educational providers often favour and get used to some assessments and screening tools. It may be the case that one assessment has been used over some time and so is trusted. Changing usage can throw up training needs. It can also appear bewildering at times in terms of how and what to choose. An assessment can provide important information to add to the picture of the learner and should aim to help to decide which intervention(s) to choose.

At the present time there remains great debate over which definition to use for each SpLD and how to actualise the diagnosis, and what tools to use. There is no widespread agreement nationally or internationally. However, the Welsh Government's SpLD Task and Finish Group[33] has developed definitions of SpLD for Wales (see SpLD Framework)

The Welsh Government has developed an SpLD Framework for Wales which focuses on use of general screening tools to identify learners who may be at risk of having a SpLD, e.g. LNF and *National Reading Test question analysis – initial indicator for specific learning difficulties (SpLD)* (2014) and then appropriate support, including the catch-up interventions to try to resolve the issues. Educational providers should consider the SpLD Framework as a first port of call. If following general screening the learner's difficulty persists then assessment should be used to identify more intensive interventions.

Before considering the SpLD Framework to identify which screening and assessment tools for SpLDs to use, it is essential to have a basic understanding of:

- typical and atypical development
- definitions being used for each SpLD
- screening and assessment principles
- up-to-date knowledge of what works to target intervention appropriately and effectively in that specific area
- monitoring principles and how to use outcome measures.

This provides an approach to decide how, when and why you are undertaking screening or an assessment and what information it will give you in order to target and choose the most appropriate intervention.

There are some actions that can help to increase consistency across LAs. Starting with a common language and using consistent definitions allows for the language and the terms we use between us to mean the same thing in any dialogue, e.g. between parent/carer and educator; educator and health professional. This can

[33] http://learning.wales.gov.uk/news/events/spld-task-finish-group/?lang=en

be common descriptors as in this document, or internationally agreed definitions such as *The ICD-10 Classification of Mental and Behavioural Disorders,* a medical classification system which was developed by the World Health Organization (WHO). Alternatively the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*[34] is used. Both of these classification systems are used for diagnostic categorisation for ADHD and DCD, e.g. in the UK by health professionals. However, neither of these manuals provide any indicator specifically about which screening or assessment tools to use.

Choosing screening and assessment tools
When selecting tools for screening or assessment:

- they need to have been developed from sound principles and from a research base
- considering the time required, and skill of administration, is also important as they may require additional staff time and may displace teaching time
- some tools need specific training and knowledge to administer and then to interpret the scores (interpreting multiple indices can be a complex and time-consuming task, especially if they are paper-based, as they may require scoring, marking, and interpreting results).

Other considerations include:

- **the age of learners**. In very young learners, acquiring development milestones may vary considerably and this can make it harder to determine whether there is a specific difficulty or delay due to lack of experience. Sometimes tools at this age may be less sensitive for this reason. Some assessments are designed only to be used for specific age groups.

- **the setting**. Some assessment tools are developed for a specific context, e.g. one-to-one and not in a group

- **how to compare assessment results**. Two tests supposedly testing the similar things will differ in their content, e.g. spelling assessments. It is important to remember that results cannot always be directly compared. Each will identify different learners

- **how does the assessment help you?** An assessment should be more than just a score. Often watching how a student does an assessment can be as useful as looking at the total score. The pattern of the responses can also be useful, e.g. a spelling assessment can provide information on where the spelling challenges are, and also if computerised may providing timings for the learner's responses.

An assessment is only one part of the information required when planning an intervention. Gaining robust and comprehensive information to produce a profile of the learner's strengths and challenges is a good approach regardless of the diagnosis.

[34] www.dsm5.org/Documents/changes%20from%20dsm-iv-tr%20to%20dsm-5.pdf

Universal screening
While there is no evidence for population screening to detect any or all SpLDs using triggers for action such as parental or teacher concern; recognising a learner is failing compared with peers, e.g. from information obtained through undertaking routine screening for literacy and numeracy (e.g. LNF[35]); or if the learner is displaying developmental delay (e.g. using the EYDAF [36]) can alert you to then undertaking further screening for specific areas of learning or behaviour.

Well-recognised guidelines for dyslexia, DCD and ADHD state the following.

The Rose report[37], in relationship to dyslexia, states:

> '…blanket screening for dyslexia of all children on entry to school is questionable, not least because screening tests for this purpose are as yet unreliable.'

DCD UK guidelines[38] state that:

> 'The use of questionnaires…is not recommended for population-based screening for DCD.'

The NICE guidelines for ADHD[39] suggest that universal screening for ADHD should not be undertaken in schools or nurseries. On referral to a SENCO, the SENCO should help learners with disordered conduct and suspected ADHD with their behaviour, and inform the parents/carers about local parent-training/education programmes..

Screening for SpLDs
Screening can be a means of quickly pinpointing where further to explore when concern is first expressed by a parent/carer, teacher or learner, or if some delay has already been identified by a professional outside of the educational setting such as a health visitor. There are many screening tools or checklists for each of the SpLDs that can be a very helpful quick way to gather more information about the learner. Some LAs have created their own checklists. However, all screening tools should always follow sound principles of having reasonable sensitivity and specificity (see Appendix 3 on page 33 for glossary of terms relating to screening and assessments). They should be easy to use and require little training.

One specific use for screening could be where delay has already been identified through universal screening for literacy and numeracy (e.g. LNF). If the learner has been identified as having one area of difficulty, e.g. with spelling, screening tools for the other SpLDs could then be used and would indicate where further assessment, or in some cases referral, may be needed (remember all SpLDs overlap). A

[35] http://learning.wales.gov.uk/resources/browse-all/nlnf/?lang=en
[36] http://learning.wales.gov.uk/news/sitenews/assessment-framework/?lang=en
[37] Rose, J (2009) *Identifying and Teaching Children and Young People with Dyslexia and Literacy Difficulties* (DCSF, 2009)
[38] www.movementmattersuk.org/dcd-dyspraxia-adhd-spld/uk-dcd-consensus/pocket-guide-to-uk-dcd-consensus.aspx
[39] www.nice.org.uk/guidance/CG72

screening tool could also be used with those at higher risk of having a SpLD, such as those entering a PRU (who are more likely than the general population to have a SpLD present)[40].

Assessing for SpLDs
Assessments are usually used to understand in more detail what and where the specific area(s) of difficulty or challenge are for the learner, and to assist with planning support or intervention. It also can be used a benchmark to know if progress has been made.

ADHD screening and assessment
There are a number of screening tools developed specifically for ADHD. Local health professionals may have a preference to be used as part of the process of gathering information to consider making a diagnosis of ADHD. When screening for ADHD, it is important to capture information from the parent/carer, teacher and, where possible, the learner. Usually observation of behaviours will also be made and this will sometimes be made by a member of the CAMHS team, in some cases when visiting the educational setting.

Assessment for ADHD should be undertaken by suitably qualified and trained professionals. This is usually a member of CAMHS team or may be the community paediatrician who undertakes this role, after obtaining information from the educational provider and from parents/carers.

Dyslexia/literacy screening and assessment
Since dyslexia is about failing to acquire specific literacy skills, it is important to understand the relative merits of screening and assessment and their outcomes. The Rose report[41] in 2009 and the Welsh benchmarking study[42] in 2012 came to similar conclusions, that it is generally agreed that the earlier dyslexic/literacy difficulties are identified the better the chances are of putting learners on the road to success.

One red flag in early years may be a delay in the learner's speech and language development. Also in early years, use of spelling assessments (and in particular non-word spelling) has been shown to be effective in identifying those with reading difficulties. This can offer suggestions of immediate classroom intervention without having to wait for a full assessment.

It is important to understand the full range of difficulties of the learner which may include poor decoding, poor listening comprehension, poor memory as well as other issues. Snowling and other researchers describe three sorts of poor readers – those with poor decoding, those with poor listening comprehension and those who have

[40] Parker, C, Whear, R, Ukoumunne, OC, Bethel, A, Thompson-Coon, J, Stein, K, and Ford, T (2014) 'School exclusion in children with psychiatric disorder or impairing psychopathology: a systematic review' in *Emotional and Behavioural Difficulties* (Routledge, 2014) DOI:10.1080/13632752.2014.945741
[41] Rose, J (2009) *Identifying and Teaching Children and Young People with Dyslexia and Literacy Difficulties* (DCSF, 2009)
[42] www.wales.gov.uk/statistics-and-research/research-dyslexia-provision/?lang=en

both difficulties. Universal screening for literacy, as used within the LNF[43] may capture many learners with difficulties but may not capture all, or the complete profile of the learner.

The first step in identifying that learners may have literacy difficulties is to notice who is making poor progress in comparison with their typically developing peers, despite high-quality teaching. The BDA[44] note there are many different types of screening tools which can be utilised.

> 'Some are delivered by computer, others need to be administered by a teacher. Some just give an estimate as to whether the child/person is likely to have dyslexic difficulties. A few offer a more detailed profile of strengths and weaknesses which help inform an appropriate teaching strategy.'

Where literacy difficulties are identified, other factors should also be considered, including amount of experience the learner has had, and their potential for having any underlying language, auditory or visual conditions, which could be contributing to any identified difficulties. Practitioners should first consider the SpLD framework before undertaking initial screening to identify learners at risk. Where appropriate, LAs should be consulted where higher levels of support may be required.

Dyscalculia/mathematics screening and assessment
The first step in identifying that learners may have specific mathematics difficulties or dyscalculia is to notice those learners making poor progress in comparison with their typically developing peers, despite high-quality teaching. The LNF contains information including the routes to numeracy and the numeracy components for different ages and stages, which provide an excellent developmental framework for mapping the learners' skills.

It is also important to rule out any underlying auditory, language or visual difficulties, which could be contributing to the identified difficulties.

There are many different types of screening tools which can be utilised by LAs. Some are delivered by computer, others need to be administered by a teacher. Some just give an estimate as to whether the learner is likely to have mathematics or dyscalculia difficulties. A few offer a more detailed profile of strengths and weaknesses which help inform an appropriate teaching strategy.

DCD/coordination screening and assessment
Delay in motor development, or concern from teachers or parents/carers should act as a trigger for further screening to capture the pattern and areas of challenges of the learner[45].

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[43] http://learning.wales.gov.uk/resources/browse-all/nlnf/?lang=en
[44] http://www.bdadyslexia.org.uk/educator/screening-and-assessment
[45] *Definition, Diagnosis, Assessment and Intervention of Developmental Coordination Disorder (DCD)* (AWMF, 2011) http://www.movementmattersuk.org/content/documents/Revised%20EACD%20UK%20Recommendations%20Pocket%20Guidelines.pdf
[46] Bishop, DVM and Snowling, MJ (2004) 'Developmental Dyslexia and Specific Language Impairment: Same or Different?' in *Psychological Bulletin* 130(6) 858–886 (2004)

There are a number of screening tools available for DCD. However, they cannot just be used interchangeably as there is evidence that they do not all detect the same learners with motor difficulties as they use different questions and have varying sensitivity and specificity. Using a screening tool can be an excellent way to capture information from observation in the class, playground and at home, and can help focus on priorities when setting goals.

There are a number of standardised assessment tools available. Most of these need to be used by suitably qualified and trained personnel in order both to make a diagnosis and to check for other potential reasons for motor difficulties.

Speech and language impairment screening and assessment
International classification systems do not specify which standardised tests of reading or language should be used, although this can make a crucial difference to whether or not a learner is identified as having an impairment and what area specifically is problematic for that learner.

Bishop[46] [47] and other specialists in the field have discussed the importance of recognising flags to identify SLIs, especially when 'language development falls well behind that of children of other children of a similar age', and the 'problems interfere with everyday life and school achievement'.

Parent/carer or teacher concern should always be a trigger for further monitoring. The following are examples of some flags that should generate this.

- Does not talk much.
- Language is immature for age.
- Struggles to find words.
- Doesn't seem to understand what is being said.
- In older learners, may fail to understand written word (compared with peers).

Screening tools and checklists mainly focus on the potential flags to be alert to that would lead to further in-depth formal assessment using standardised tools. Swanson[48] has discussed that gaining access to speech and language therapists (SALTs) sometimes may lead to more frequent formative assessments in the classroom, and fewer formal assessments taking place.

In diagnosing a SLI it is also important to check there are no other reasons for the difficulties such as hearing loss, acquired brain damage or lack of experience.

Intervention and management guidance

Each SpLD difficulty does not represent one unitary area of challenge, but is made up of a variety of components and characteristics. In order to intervene for each

[46] Bishop, DVM and Snowling, MJ (2004) 'Developmental Dyslexia and Specific Language Impairment: Same or Different?' in *Psychological Bulletin* 130(6) 858–886 (2004)
[47] www.slideshare.net/RALLICampaign/how-is-specific-language-impairment-identified-13957123?related=2
[48] Swanson, PB and Nolde, PR (2011) 'Assessing Student Oral Language Proficiency: Cost-Conscious Tools, Practices and Outcomes' in *The IALLT Journal* (2011) 41(2) 72–88

learner with a SpLD it is important not only to understand the area of difficulty that has been identified but also gain a picture of the learner as a whole in the context of their lives. This is called an ecological approach.

The following are key points to consider (see Appendix 5 for checklist when considering intervention approaches).

- **Intervention starts with good-quality teaching and sufficient and appropriate practice,** usually taking place within the classroom, and working with the parents/carers at home to reinforce these skills.
- **Using multisensory approaches** are a generic principle across all SpLDs. The rationale for this is to provide varying approaches to meet the needs of a range of different learners in class, group and one-to-one settings.
- **Learners' progress may vary**. For some learners progress may be slow and the first stage in improvement may be related to improving confidence even before working on competencies in order to encourage the learner to be motivated. This may certainly be true for some learners in PRUs who may already be disenfranchised from education.
- **Cost- and time-effectiveness.**
- **Goal setting** should be undertaken for all SpLDs at the start of intervention. Goals set at the level of activities and participation should be given priority, and the child's parent's/carer's and educator's viewpoint/priorities taken into account.
- **Evaluation of the effect of intervention should be undertaken**. Measures should consider including the impact and improvement in participation and activities with peers, alongside specific measures of skills gained. This is sometimes called transferability. Sources of evaluation can be through assessment, observation gained from parent/carer and teacher reports, from nursery/pre-school/school reports and also from the 'voice' of the learner.

The authors of *Research into dyslexia provision in Wales* [49] made an important general point regarding both effectiveness and cost-effectiveness when considering intervention approaches of all types.

> 'It is important to make sure that intervention is not only effective, but is also cost effective...Cost effectiveness can be estimated based on the amount of benefit conferred by the intervention, over and above the regular teaching provision (i.e., the *added value effect size*), and on the number of hours of teacher input per child. One important finding in this respect is that intervention provided in small groups can be just as effective as working with children individually, particularly with younger and less severely impaired children.'

Monitoring the effectiveness of any intervention is essential. With increasing use of computers in the classroom delivering computerised approaches to screening, assessment and monitoring may save time, money and deliver new and more in-depth information about the learner that previously could not be accessed (e.g. breakdown of scores, time taken for completion, comparisons between learners)

[49] www.wales.gov.uk/docs/caecd/research/120824-dyslexia-provision-literature-review-en.pdf

making it easier to pinpoint where challenges are and providing guidance on where and how to intervene.

Before starting to intervene it is necessary and important to gather information to create a plan and set goals. In England, the Education, Health and Care (EHC) Pathway for families that are new to the SEN system[50], launched in 2014, suggests a range of sources of information and resources that can be drawn upon to establish a clear analysis of a learner's need and assist in this process. The document *Everybody Included: The SEND Code of Practice explained* (NASEN)[51] describes the need to include:

- teachers' evaluation and experiences of the pupil
- pupil progress, attainment and behaviour
- the learner's development in comparison with their peers
- the views and experience of parents/carers
- the learner's own views
- advice from external support services.

They go on to describe the need for a range of tools to identify the needs.

> '…It may well be necessary to explore further the precise gaps in the pupil's learning and development and to clarify what the barriers to learning may be. It is good practice to look afresh at the range of individualised assessment 'tools' and approaches the school itself can access to support this closer identification of need, such as:
>
> - Standardised tests.
> - Criterion-referenced assessments and checklists.
> - Profiling tools, for example for behaviour and speech, language and communication needs.
> - Observation schedules and prompt sheets.
> - Questionnaires for parents.
> - Questionnaires for pupils.
> - Screening assessments, for example for dyslexia.'

ADHD interventions

The UK NICE guidelines[52] set out guidance on the intervention and management of ADHD. It describes how teachers who have received training about ADHD and its management should provide behavioural interventions in the classroom to help learners with ADHD. This includes parent/carer training/education programmes.

The guidelines state that healthcare professionals should offer parents/carers of pre-school learners with ADHD a referral to a parent-/carer-training/education programme as the first-line treatment if the parents/carers have not already attended such a programme, or if the programme has had a limited effect. If the learner is

[50] www.gov.uk/government/uploads/system/uploads/attachment_data/file/275104/RR326B_EHC_planning_pathway_-_FINAL.pdf
[51] www.sendgateway.org.uk/download.everybody-included-the-send-code-of-practice-explained.html.
[52] http://www.nice.org.uk/guidance/CG72

being seen by health/CAMHs provision and the learner with ADHD has moderate levels of impairment, NICE guidelines indicate that the parents/carers should be offered referral to a group-parent training/education programme, either on its own or together with a group-treatment programme (such as cognitive behavioural therapy – CBT – and/or social skills training) for the learner.

Drug treatment in school-age learners
NICE indicates that in school-age learners with severe ADHD, drug treatment should be offered as the first-line treatment, along with a group-based parent training/education programme. The guidelines go on to say that drug treatment (e.g. methylphenidate or atomoxetine) for learners with ADHD should always form part of a comprehensive treatment plan that includes psychological, behavioural and educational advice and interventions.

Use of cognitive training
The evidence provides some support for the use of cognitive training in learners with inattentiveness or ADHD. There was some evidence of improvement in some academic outcomes, but not others, and some evidence for improvements in symptoms of ADHD in the short-term such as improved executive functioning, i.e. ability to plan and organise or self-manage, but the benefit on behavioural symptoms is more uncertain.

Other useful guidelines
Other useful guidelines published with indications for management of ADHD include the following.

- Scottish Intercollegiate Guidelines Network (SIGN) guidelines[53] (SIGN, 2009) set out to provide a framework for evidence-based assessment and management of ADHD/hyperkinetic disorder (HKD) which can be applied within a local multidisciplinary and multiagency approach.

- British Association for Psychopharmacology guidelines for intervention (2014)[54]. The guidelines summarise current literature, generating expert consensus recommendations for the treatment of ADHD in children and adults.

Dyslexia and literacy interventions
Professor Greg Brooks in the Rose report (2009) makes an important point in relation to intervention for literacy/dyslexia intervention:

> "In order to judge whether an initiative has really made a difference, it is not enough just to ask the participants – they will almost always say it has. So quantitative data on the learners' progress are essential, measured by appropriate tests of reading, spelling or writing."

[53] www.sign.ac.uk/guidelines/fulltext/112/
[54] Bolea-Alamañac, B, Nutt, DJ, Adamou, M, Asherson, P, Bazire, S, Coghill, D, Heal, D, Müller, U, Nash, J, Santosh, P, Sayal, K, Sonuga-Barke, E and Young, SJ 'Evidence-based guidelines for the pharmacological management of attention deficit hyperactivity disorder: Update on recommendations from the British Association for Psychopharmacology' in *Journal of Psychopharmacology* (SAGE, 2014) www.bap.org.uk/pdfs/ADHD_Guidelines.pdf

The report goes on to say that:

> 'Intervention programmes are best delivered by teachers who understand how to attune a programme to a child's learning difficulties, or by trained classroom support staff who are well managed by such teachers.'

The Rose report describes 'three Waves of Provision'[55].

Wave 1 – Quality First Teaching. This describes the provision of high-quality, systematic phonic work as part of a broad and rich curriculum that engages children in a range of activities and experiences to develop their speaking and listening skills and phonological awareness.

Wave 2 – Learners that require additional support to achieve well can be provided with this through small group, time-limited intervention programmes delivered by a member of the school's classroom-based support team to advance children's progress and help them achieve in line with their peers.

Wave 3 – Intensive support is provided for those children who require the personalised approach of a programme that is tailored to their specific, often severe, difficulties. It is usually taught as a one-to-one programme by a teacher or a member of the support staff who has undertaken some additional training for teaching children with reading difficulties.

This graduated approach is also echoed in the Welsh Government's LNF programme, and the *Guidance for literacy and numeracy catch-up programmes* (Welsh Government, 2012)[56]. If learners are first identified as falling behind in their literacy skills, the first stage would be to use the guidance and the principles described. If these are not helping the learner progress, then it is at this stage closer inspection and more in-depth assessment would be undertaken to consider what and where the literacy problems are.

Assessments at this stage may need to look at phonics, working memory, ability to hear the sounds, and visual skills to check out what and where the challenges may be for that learner.

The Wales benchmarking report[57] also has specific information on intervention guidance and makes the point that there will be some learners that will require a more intensive and specifically tailored approach in order to improve their skills. The conclusions from the report state that improving phoneme awareness and using systematic phonics methods that are embedded within a broad literacy curriculum is a useful approach and benefits are greatest for younger learners. Wherever possible, children who are 'at risk should be identified in the preschool and early school years, and they should receive well-structured and systematic intervention. However, it should be borne in mind that a constant number of learners with severe and profound difficulties will not respond well to treatment. Often, such learners fail

[55] http://webarchive.nationalarchives.gov.uk/20130401151715/http://www.education.gov.uk/publications/eOrderingDownload/00659-2009DOM-EN.pdf
[56] http://learning.wales.gov.uk/docs/learningwales/publications/121105guidanceforlitnumcatchupen.pdf
[57] www.wales.gov.uk/docs/caecd/research/120824-dyslexia-provision-literature-review-en.pdf

to improve despite the early years input and they continue to need specialised help in school. They require higher and more prolonged levels of resources for their educational provision. Nevertheless, the numbers of these learners could be significantly reduced by early intervention, thus ensuring that funding is concentrated on those learners with entrenched difficulties.

Mathematics/dyscalculia interventions

The document *What Works for Children with Mathematical Difficulties?* (Department for Children, Schools and Families, 2009) made an important point that mathematics difficulties are not one unitary area of challenge, but are made up of a variety of components including counting, memory for arithmetical facts, the understanding of concepts, and the ability to follow procedures. Each of these components also has subcomponents. Each learner may have one or more specific areas of weakness that may need to be addressed and can be discrete in their own right.

Some learners with mathematics difficulties struggle with the representations of numbers and operations and so need to have information presented in varying formats to assist them. Other learners with difficulties with mathematics may also have co-occurring difficulties in other areas of learning such as having SLI or dyslexia, and so understanding where that is a challenge will assist in targeting the appropriate actions.

DCD interventions

The UK umbrella group for DCD/dyspraxia), Movement Matters[58], developed a set of UK consensus guidelines in 2012 for intervention.

Learners with a diagnosis of DCD should receive intervention, as there is evidence to suggest that a range of interventions, including those in an educational setting, can be of benefit. Personal factors, environmental factors and the burden of having DCD which can impact on the learner's self-esteem, their participation in day-to-day activities should be considered when planning any intervention and used also as potential outcome measures.

As learners with DCD often have coexisting disorders, e.g. ADHD, intervention priorities need to be established. Individual factors, e.g. lack of motivation or psychosocial factors such as anxiety, may limit the efficacy of some interventions. In some learners with DCD compensatory and environmental support may be sufficient, i.e. making adaptations such as using computers for recording rather than handwriting.

SLI interventions

Most learners with identified SLIs will have an assessment by a qualified SALT who will provide guidance for the educational provider and for home and decide on intervention based on the individual profile of the learner taking into consideration the presence of other SpLDs.

[58] www.movementmattersuk.org

Several studies[59] have reported on what works for intervention for SLI and speech and language delay. The main conclusions from this review were that while there may be some support for the effectiveness of SALT for learners with expressive phonological and expressive vocabulary difficulties, the evidence concerning the effectiveness of interventions for expressive syntax is mixed (the rules governing the combination of words to form sentences) and there was little or no evidence available concerning interventions for learners with receptive language difficulties. In the pre-school age there is some evidence that intense intervention by SALTs has the best outcomes[60].

[59] *Better communication research programme: 1st interim report* (DFE, 2010) www.gov.uk/government/uploads/system/uploads/attachment_data/file/193427/DFE-RR070.pdf

[60] Gallagher, AO, and Chiat, S (2010) 'Evaluation of speech and language therapy interventions for pre-school children with specific language impairment: a comparison of outcomes following specialist intensive, nursery-based and no intervention' in *International Journal of Language and Communication Disorders* (2009) 44(5): 616–638

Appendix 1: Potential processes for SpLDs and LAs

The following is one example of a compilation of a process or pathway from different LAs and from research.

1. Obtain baseline measures and see if there are any triggers for action

- Measuring developmental milestones in pre-school through the Foundation Phase can help to determine which learners are behind compared with their peers (e.g. using the EYDAF).

- Check results from literacy and numeracy skills undertaken through the LNF to track progress and identify those that are not making progress compared to their peers.

2. Other potential triggers for action

Parental concerns

- Health concerns, e.g. glue ear, medical conditions, visual, hearing, cleft palate.
- Educational concerns, e.g. delay or difficulty in speaking, listening, reading, spelling, writing or number skills compared to class.
- Developmental delay, e.g. language, social, motor.
- Sleep disturbance.
- Friendships, bullying.
- Any home concerns – housing, parental or family challenges, etc.

Practitioners concerns

- Delay or difficulty in speaking, listening, reading, spelling, writing, number skills compared to class.
- Behaves differently to other children, such as withdrawn, hyperactive, answers out of turn, avoids interaction in class, alone in the playground.
- Bullies or bullied
- Movement – fine and gross motor skills delayed for age and experience.

Health/social concerns

- Reported from health visitor (HV), GP, CAMHS, paediatricians, psychology, social services.
- Delay/identification on screening/developmental tools.

Learner concerns

- With peers/classes.
- Concerned with specific skills areas.
- Emotional well-being.

Also consider other reasons for the challenges

- Lack of experience.
- Lack of opportunity.
- Missed schooling.
- Not understanding (SLI or EAL).
- Avoidance or anxiety.

3. Gain a complete picture

- Collate multiple source information from parent/carers and teacher (and learner where appropriate and available) and other relevant information where present from external sources.
- Observe learner in different settings where possible, e.g. playground, different classes, lunchtimes.
- Identify pattern and areas of delay using:
  – specific screening tools for SpLDs to explore areas in more detail, e.g. attention, language, motor
  – assessment tools to gain understanding of where specific difficulties lie , e.g. spelling; reading comprehension; handwriting skills; working memory.

- Remember that SpLDs often overlap. Think about how having one difficulty can alter the way you behave, e.g. not being able to write may result in shorter essays being produced; not being able to play ball games may mean avoidance when there is PE; not understanding instructions may make the learner feel frustrated and/or angry.

- If you see red flags – refer to appropriate professional and provide baseline information.

4. Agree an action plan

(Terms for this may vary, e.g. IEP/IDP/ILP/PCP/PDP)

- Agree and set priorities with parent/carer, teacher and learner (where appropriate).
- Decide a functional action plan together and set goals and review dates.
- Consider a ‘response to intervention (RTI)’ approach and carry out the plan.

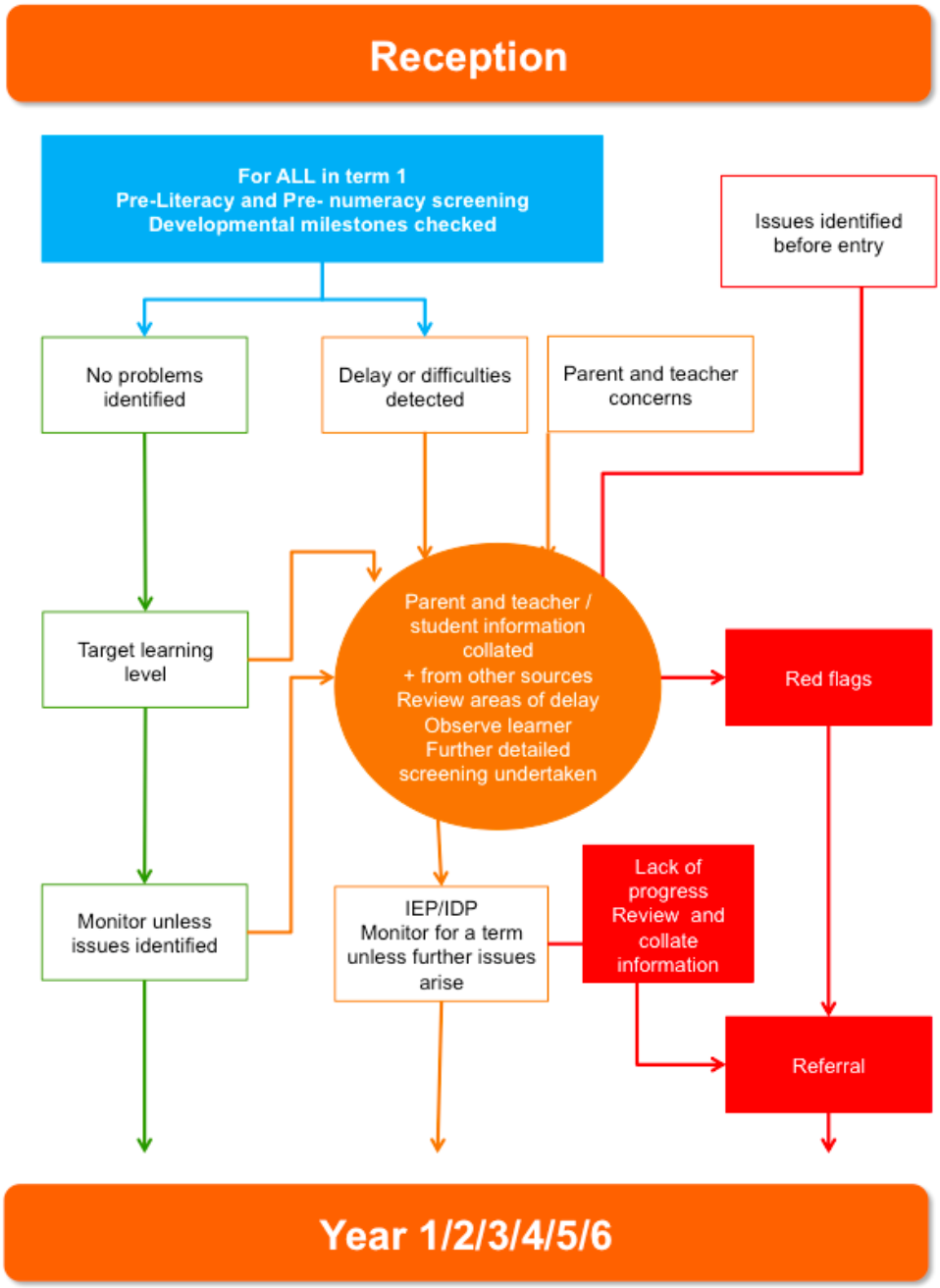
5. Monitor and review

- Monitor progress for a predetermined time, e.g. one term.
- Review meeting. Has there been appropriate and sufficient practice and time to gain the skills? Discuss what has worked well. What could be changed? What new goals need to be set to continue progress?
- Any continued concerns or non-response to intervention – follow guidelines or pathway if in place, or refer to appropriate professional and provide baseline information and action plan of intervention so far.

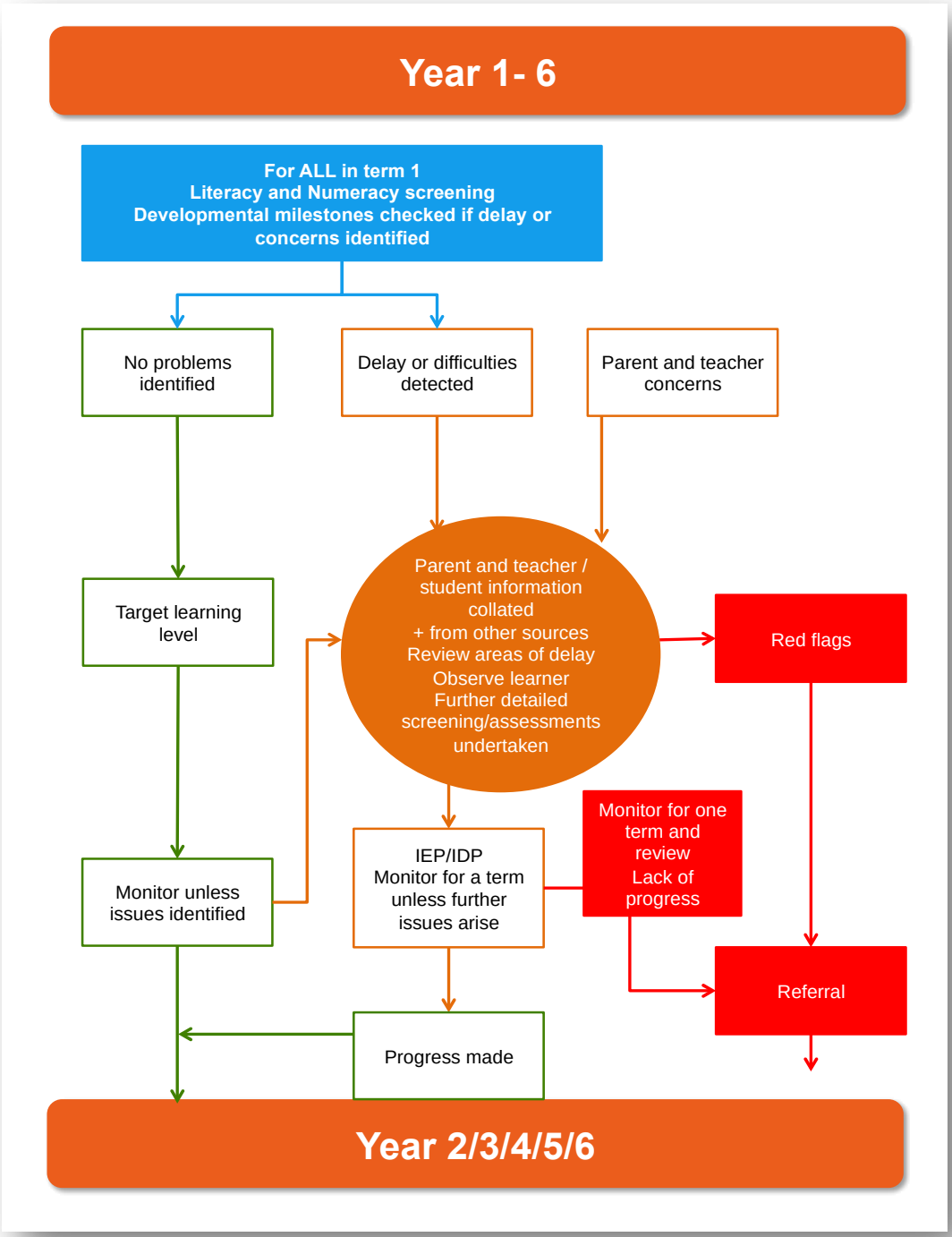
6. Multi/interdisciplinary pathway referral

- Gather any additional information to prepare for specific referral.
- If local/national protocol in place follow steps.
- Consider specialist internal and/ or external referral.

Example of pathway and processes at reception stage



Example of pathway and processes for Years 1–6



Appendix 2: What to consider when choosing screening and assessment tools

Considerations when choosing	Additional comments	Notes
Rationale for screening?	Use a screening tool if you want to find out more information to determine whether to undertake an assessment and what area to focus on. Need something quick and easy to complete. Cheap to use. Little training required. Easy to score.	Do you need to gather additional information from parent/carer as well? How does the screening or assessment tool influence your actions for targeting intervention?
What was the tool (screening or assessment) developed for?	Check age range. Does this have UK norms?	e.g. SNAP1V is a screening tool developed for screening for ADHD, but not for screening for **all** behaviour problems
When was the tool (screening or assessment) developed?	Are the norms being used still relevant?	
What training or qualification do you need to use the assessment?	Can someone learn to administer the assessment but someone else needs to look at results and score it?	

Are you considering using a subsection of an assessment or adapting it for use?	Check that the scores remain valid. You may need to do all of the test items to be able to produce a percentile or standard score.	
What is the cost of the tool (screening or assessment)?	Is this a one-off cost or are there ongoing costs? Is there added value using some assessments as they provide guidance for management as well?	Are there any ongoing costs, e.g. response sheets?
How long does it take to complete?	Computerised assessments may require less direct time to be administered.	
Do you require any specific equipment?		Could this be shared between educational settings?
How much space do you require to undertake the assessment?		

The learner and their environment

Does the learner's behaviour vary from class to class or with different teaching professionals?	In educational settings you may need information from several teaching practitioners.	
Are there any factors such as anxiety or fatigue which could impact on how the learner behaves in an assessment?	Consider the time of day and weekday when the assessment is undertaken. What has occurred before the assessment, e.g. a challenging lesson for the learner?	

Are there any external factors that will affect the learner's ability to focus on the assessment?	External noise from other learners and movement may be distracting and affect performance.	
Do you need any additional information to guide the assessment, e.g. from parent/carer or other teacher?		

Appendix 3: Glossary of terms used relating to screening and assessments tools

What is a checklist?

A checklist is a list of items for consideration. They can be in the form of questions or actions to be carried out. They can have a scoring system or they can collect comments. Checklists can speed up the collection of information by using tick-boxes and rating scales.

What is a screening tool?

Screening tools are designed to be inexpensive, quick and easy to use to provide a snapshot that enables the identification of learners needing a more thorough assessment. It is a first step in identifying ‘red flags’ and whether additional assessment is needed.

What makes a good screening tool?

Sensitivity: The degree that the tool correctly identifies the ‘at risk’ learner. There is always a need to minimise the number of learners incorrectly identified as having difficulties. The cost of over-identification has been shown in general to be substantially less than the cost of under-identification for both learner and society.
Specificity: The degree the tool correctly identifies those learners not ‘at risk’.
Practicality: The tool is easy to administer, doesn't take too long to complete, and doesn't need an expert to deliver it.
Consequential validity: The screening measure does no harm to the learner and is linked to effective interventions.

What is test familiarity?

If you ask a learner to do the same assessment twice in short succession it is worth considering whether an improvement in performance is related to familiarity with the assessment or an actual improvement in the learner’s skills.

What is a false positive?

This is where the screening or assessment tool identifies the learner having a difficulty or condition when they do not. This could mean that the wrong assumptions are made or an inappropriate intervention given. It could also raise anxiety levels in the parent/carer unnecessarily.

What is a false negative?

This is where the screening or assessment tool misses that the learner actually has a difficulty or condition. This could mean that less intervention or support is put in place or an onward referral is not made for that learner.

What is a diagnostic assessment?

It is an in-depth assessment related to strengths and weaknesses in each skill area. It helps determine what learners already know and can do and identify needed instruction.

What is a standardised assessment?

A standardised assessment is one that has been given to a large group of learners of different ages to establish the ‘normal’ range of performance.

What is a norm-referenced assessment or test?

Norm-referenced refers to standardised tests which are designed to compare and rank test takers in relation to one another. Norm-referenced tests report whether test takers performed better or worse than a hypothetical average learner, which is determined by comparing scores against the performance results of a statistically selected group of test takers, typically of the same age or grade level, who have already taken the exam.

Norm-referenced scores are generally reported as a percentage or percentile ranking. Norm-referenced tests are specifically designed to rank test takers on a ‘bell curve’ or a distribution of scores that resembles, when graphed, the outline of a bell, i.e. a small percentage of learners performing well, most performing averagely, and a small percentage performing poorly.

What is a raw score?

A raw score is the score for a specific assessment. Using this alone is difficult as you cannot make comparisons between different assessments, and the scores can mean completely different things. It does not say whether the learner is above average or below average.

What is a standard score?

The standard score is a very useful statistic because it (a) allows an understanding of where the score occurs within the normal distribution and (b) enables comparison to be made of two scores that are from different normal distributions. Standard scores estimate whether a learner's scores are above average, average, or below average compared to peers. They also enable comparison of a learner's scores on different types of tests.

What is a percentile?

Percentiles indicate the percentage of people scoring at a given level or below. Fiftieth percentile is an average level with half the population expected to get a score below that.

What is a quartile?

Quartiles divide the set of data into four equal parts.

What is a standard deviation?

It is a quantity expressing by how much learners in a group differ from the mean value for the group. If, for example, reading skills are normally distributed then 7 per cent of learners would have expected below 1.5 standard deviations (SDs) and 2 per cent of learners below 2 SDs.

Z-scores: These scores are scaled on a number line ranging from minus four to four with zero being in the middle. On this scale, zero is average. Positive scores are above average, and negative scores are below average.
T-scores: These scores range from 10–90 in intervals of 10 points. Fifty is average on this scale.

What is a criterion-referenced assessment or test?

This involves determining a learner's ability by comparing the learner's achievements with clearly stated criteria for learning outcomes and clearly stated standards for particular levels of performance. The goal with these assessments is to determine whether or not the individual has demonstrated mastery of a certain skill or set of skills.

There is not a cut-off score; the basis of the assessment is to ascertain whether the learner has achieved the skill in question.

The challenge of a criterion-referenced assessment is to determine what should be expected by a certain age, and much discussion ensues about what should indicate this. How do we know what a learner of seven years of age should be able to do in mathematics unless we measure many 7-year-old learners? Do we determine there is a problem if the individual is in the bottom fifth percentile on one area, without gathering information about the other areas of learning that may be impacting on that learner's performance?

What is a performance-based assessment?

This is associated with measuring whether the learner can actually demonstrate the skills the test is intended to measure by doing real-world tasks that require those skills, rather than by answering questions asking how to do them. For example, if the learner should be able to read a set passage and extract information to do a task,

then this is what is assessed. Another example: can the learner change for gym class in time for the start of the lesson?

Appendix 4: Further considerations when considering screening and assessment for SpLDs

Can there be one assessment tool for assessment of a SpLD, e.g. for dyslexia or dyscalculia?

Learners with literacy and or numeracy difficulties will vary greatly in their presentation. Some, for example, may have reading and writing difficulties but may be able to understand oral information well, whereas other learners may be poor comprehenders who experience difficulties with reading comprehension, despite age-appropriate reading accuracy.

One assessment for literacy will not be able to identify this range of differences. The same can be said for mathematics difficulties. Dyscalculia represents an umbrella of different mathematics difficulties, which will vary from learner to learner. Part of being able to undertake mathematics competently is the ability to understand the different mathematics terms used and this may be an additional challenge in a child with a SLI.

Do similar tools developed for the same area of learning or cognition always measure the same thing, e.g. can one spelling assessment result be compared with another?

Despite assessments being labelled as assessing similar areas of functioning their design and content will differ and so this may result in variations concerning which learners they identify as having a difficulty (and potentially receiving support). It is a bit like using two slightly different-sized ladles in a soup pan. One study using two different mainstream assessment tools for DCD found they identified very different learners in the 7 to 10-year-old range they examined.

How do you know how accurate an assessment tool is?

This is dependent on what you want to measure and what criteria are being used. Look at the definitions of sensitivity and specificity.

What happens if we use different tools to screen and assess in different LAs?

If one educational setting or LA uses one set of screening and assessment tools and another uses different ones, there will be variations between LAs concerning which learners will be identified as having difficulties or not. We are comparing apples with pears!

How do you decide what ‘cut-off’ to apply?

Cut-offs (or percentiles, or standard scores) are often used to determine who has access to a service or intervention. This is a potential problem as different tests assess for different things and cannot always be compared directly. This is called

correlation (the amount that two assessments are testing for the same thing). This was noted in the previous benchmarking survey undertaken across Wales for dyslexia. Intervention policies should generally not rely on one source of information or assessment and should also form part of the audit of LA arrangements and approaches to identifying and supporting learners with SpLDs in Wales.

An overall view of the learner gathered from multiple sources is required for a more accurate picture of the need and level of intervention, especially in learners with SpLDs; otherwise decisions for intervention could potentially be made on single assessments.

Should we screen all learners for SpLD?

There is generally not good evidence that this is an effective approach for identifying SpLDs.

Should we screen learners with one SpLD for other SpLDs?

Around 80 per cent of learners will not cause teaching practitioners and their parents/carers much concern. Approximately 20 per cent of learners have special educational needs and disabilities (SEND) and of these a proportion will have SpLDs resulting in challenges with cognition and learning, emotional well-being and physical difficulties. These don't present 'neatly' and so in order to identify a complete profile of strengths and challenges in a learner it would be necessary to screen for these.

What is the impact of mislabelling learners?

Approximately 60 per cent of exclusions have been cited to be in learners with a SEND. Sometimes behaviour is identified rather than the underlying potential reasons for this behaviour. Learners with SLI, literacy difficulties and ADHD are at greater risk of exclusion than mainstream learners. Learners in a PRU are more likely to be also at risk of exclusion. There is a greater risk of ADHD and SLI in particular in learners in PRUs. Misidentification may lead to greater risk of becoming NEET. In Wales, just over one in five 19 to 24-year-olds and one in ten 16 to 18-year-olds were NEET – see *Statistical First Release: NEET Quarterly Brief – January to March 2014* (Department for Education, 2014). A proportion of these will have SpLDs.

Why do some learners get diagnosed with some conditions?

- There may be greater awareness of some conditions compared with others, e.g. dyslexia and SLI are being recognised more in schools in Wales than the other conditions despite the prevalence of the conditions being similar. This may be related to a greater focus on literacy and routine screening for this.

- Learners who behave negatively may be recognised as having behavioural/ emotional challenges, but may not then also be recognised as potentially having SLI or ADHD, for example. Learners with SLI have a greater risk of behavioural difficulties.

- Some learners may be quiet, not disruptive and may be considered ‘less able’ and may not alert a teacher or parent/carer to be concerned.

- The diagnosis the learner gets is often the one that is most obvious and causing the most concern.

- Some parents/carers may be more informed about SpLDs and/or may also have a SpLD themselves.

What qualifications do you need to use screening and assessment tools?

Some assessments have been developed for use only by those with specialist qualifications, or only after training has been given in delivery and interpretation. In the field of SpLD, Associate Member of the British Dyslexia Association (AMBDA) status is one common qualification used for teachers who assess. However, some assessments need specific qualifications that only a qualified and registered psychologist, OT or speech and language therapist, for example, would have.

The following assessments are some examples of assessments that can only be used by someone who is registered as a practitioner psychologist and also a chartered psychologist with the British Psychological Society or can be used by a SALT or occupational therapist.

- *Clinical Evaluation of Language Fundamentals – Fourth Edition UK* (*CELF-4*^{UK}) (Pearson, 2006).
- *Movement Assessment Battery for Children – Second Edition* (*Movement ABC-2*) (Pearson, 2007).

There are some assessments that do not require an individual to have advanced training in assessment and interpretation. These assessments are usually targeted at qualified teachers who do not have advanced specialist training. The following are examples.

- *York Assessment of Reading for Comprehension* (*YARC*) (GL Assessment).
- *British Picture Vocabulary Scale: Third Edition* (*BPVS3*) (GL Assessment).
- *Detailed Assessment of Speed of Handwriting* (*DASH*) (Pearson, 2007).

Appendix 5: List of questions for practitioners when considering intervention approaches

A useful review of how to consider which literacy and numeracy interventions to use can be seen in the Welsh Government's *Guidance for literacy and numeracy catch-up programmes* (2012)[61].

Some interventions in the field of ADHD, DCD and SLI will be guided by health professionals who may guide the support determined by locally or nationally developed protocols.

Assessing the intervention method

Is there reliable and freely available impact data acquired through objective research to verify the effectiveness of the programme in terms of accelerating improvement in the area of skill development that you want to work on?	
What is the evidence of effectiveness? Does the intervention have a lasting impact once the intervention has ended, or does it only works while receiving it?	
Has the intervention been developed for the specific purpose you are using it for?	
Do you require specialist training to deliver it?	
If it is targeting an aspect, e.g. reading, does it achieve this? How are the components broken down and worked on?	

Assessing the progress of the learner using a chosen intervention

Once you have chosen the intervention approach, consider the following.

Who will deliver the intervention? What skills do they need? What training do they have or need?	
Consider if there are constraints on delivering the intervention, e.g. limited space/noisy classroom/lack of time/specific resources required to deliver it. What resources do you require?	
How can you optimise delivery, e.g. finding a quiet setting/sufficient space/time of day, so the learner is not too tired to focus on the tasks?	
Can you provide intervention as part of a group or does it need to be one to one?	
Have you defined the goals for the intervention? Have you gathered them from relevant sources, e.g. parent/carer/teacher/learner?	
Are you clear about the steps that need to be made to achieve your goals?	

[61] learning.gov.wales/resources/browse-all/catchupguidance/?lang=en

What will you use as measures of effectiveness? Will you use a repeat test? Will you look at the impact on confidence/participation/transferability into other areas? How will you do this?	
What information/data will you measure and record to track and monitor? How and where will this be recorded?	
How will you build-in sufficient practice in the skills you are trying to achieve at home or at school?	
Are families/carers considered in the intervention approach to provide opportunities for practice between sessions? What information can you relay to the families/carers to help with this?	
What is the cost to develop, buy or manage the intervention? Consider the different aspects to delivery and monitoring.	

What is progress monitoring?

This measures each learner's level of performance against identified goals for learning at regular intervals. Progress is measured by comparing expected and actual rates of learning. Instructional strategies are then adjusted to meet the individual learner's learning needs.

What is the response to intervention (RTI) model?

This has generally been described as a universal screening approach mainly focusing on reading difficulties, but has also included writing, mathematics and behaviour. A typical RTI model requires screening to be undertaken on a regular basis during the academic year to highlight those learners who are 'at risk'. In pre-school age this can lead to potential false positives and negatives as delay may be due to lack of experience and/or disorder which may produce unnecessary anxiety. However, there may be learners exhibiting 'red flags' highlighting concerns and the need to monitor the learner's educational development, e.g. a learner with speech and language or motor delay. (See developmental milestones.)

The key principles relating to RTI include the following.

- Teach all learners.
- Intervene early.
- Use multi-layer model.
- Use problem-solving processes to explore why something is working or not.
- Use assessments – these are defined as screening, diagnostics, and for progress monitoring.
- Use evidence-based instruction.
- Monitor progress.
- Use data to make decisions to act and move the learner through layers of support. This will require an ongoing data collection system.

For further information see the RTI Action Network website at www.rtinetwork.org/learn/research/universal-screening-within-a-rti-model

Appendix 6: Useful organisations associated with SpLDs

ADHD

The National Attention Deficit Disorder Information and Support Service (ADDIS)
ADDIS provide people-friendly information and resources about ADHD for anyone who needs assistance – parents/carers, individual teachers or health professionals.

ADDISS
79 The Burroughs
Hendon
London
NW4 4AX

Tel: 020 8952 2800
e-mail: info@addiss.co.uk
Website: www.addiss.co.uk

Dyscalculia

British Dyslexia Association (BDA)
The BDA promotes early identification of SpLD and the need for support in schools to ensure opportunities to learn for dyslexic learners.

The British Dyslexia Association
Unit 8 Bracknell Beeches
Old Bracknell Lane
Bracknell
RG12 7BW

Tel: 0333 405 4555 (switchboard) 0333 405 4567 (helpline)
Website: www.bdadyslexia.org.uk/

Association of Teachers of Mathematics (ATM)
It responds and speaks with authority on matters relating to the learning and teaching of mathematics and influences decisions to the benefit of all who are learning mathematics.

Association of Teachers of Mathematics
Unit 7 Prime Industrial Park
Shaftesbury Street
Derby
DE23 8YB

Tel: 01332 346599
e-mail: admin@atm.org.uk
Website: www.atm.org.uk

Dyslexia

The Dyslexia-SpLD Trust
Is a collaboration of voluntary and community organisations with funding from the Department for Education to provide reliable information to parents/carers, teachers, schools and the wider sector.

The Dyslexia-SpLD Trust
CAN Mezzanine
49–51 East Road
London
N1 6AH

Tel: 0207 250 8108
e-mail: info@thedyslexia-spldtrust.org.uk
Website: www.thedyslexia-spldtrust.org.uk/

British Dyslexia Association (BDA)
The BDA promotes early identification of SpLD (SpLD) and support in schools to ensure opportunity to learn for dyslexic learners.

(Address above.)

Dyslexia Action
Offers help and support direct to individuals. Empowering others so they can help individuals affected by dyslexia.

Dyslexia Action House
10 High Street
Egham
Surrey TW20 9EA

Tel: 0300 303 8357
e-mail: info@dyslexiaaction.org.uk

Is this their local address?

e-mail: cardiff@dyslexiaaction.org.uk
Tel: 029 2048 1122
Website: www.dyslexiaaction.org.uk/

Dyslexia Wales
Tel: 0808 1800 110
Website: www.walesdyslexia.org.uk

DCD

The Dyscovery Centre
The Dyscovery Centre is a specialist and high-quality service providing clinical services, undertaking research, providing consultancy services and training at all levels from awareness-raising courses to Masters degree level in developmental disorders and all SpLD.

The Dyscovery Centre
University of South Wales
Felthorpe House
Caerleon Campus
Lodge Road
Caerleon
Newport
NP18 3QR

Tel: 01633 432330
e-mail: dyscovery.centre@southwales.ac.uk
Website: http://dyscovery.southwales.ac.uk/

Dyspraxia Foundation
8 West Alley
Hitchin
Hertfordshire
SG5 1EG

Tel: 01462 455016
e-mail: dyspraxia@dyspraxiafoundation.org.uk
Website: www.dyspraxiafoundation.org.uk/

Movement Matters
Movement Matters is the UK umbrella organisation representing the major national groups concerned with children and adults with DCD.
This includes DCD-UK, The Dyspraxia Foundation, The Developmental Adult Neuro-diversity Association (DANDA) and the National Handwriting Association.

e-mail: info@movementmattersuk.org
Website: www.movementmattersuk.org

National Handwriting Association
They aim to raise awareness of handwriting as a crucial component of literacy. They promote and foster good practice in the teaching of handwriting and provide support for those working with children and adults who have handwriting difficulties.

National Handwriting Association
2 Moths Grace
Basingstoke
Hampshire RG24 9FY

Tel: 01256 464598
e-mail: nha.finance@btconnect.com
Website: www.nha-handwriting.org.uk/

Specific language impairments

The Communication Trust
The Communication Trust is a coalition of over 50 voluntary and community organisations with expertise in speech, language and communication.

The Communication Trust
8 Wakley Street
London
EC1V 7QE

Tel: 0207 843 2526
e-mail: enquiries@thecommunicationtrust.org.uk
Website: www.thecommunicationtrust.org.uk/

Afasic
It is a parent-led organisation to help children and young people with speech and language impairments and their families.

Afrasic
20 Bowling Green Lane
London
EC1R 0BD
Tel: 020 7490 9410 (enquiries) 0300 666 9410 (helpline)
Website: www.afasic.org.uk/

The SLI handbook (ICAN Pub, 2011)
http://icancharity.org.uk/resources/sli-handbook

Raise Awareness of Language Learning Impairments (RALLI)
www.youtube.com/user/RALLIcampaign

Afasic Cymru
Titan House
Cardiff Bay Business Centre
Lewis Road
Ocean Park
Cardiff
CF24 5BS

Tel: 029 2046 5854
e-mail: jeannette@afasiccymru.org.uk
Website: www.afasiccymru.org.uk

Afrasic Cymru have developed Welsh-language resources.

I CAN
I CAN is a children's communication charity.

I CAN
8 Wakley Street
London
EC1V 7QE
Tel: 020 7843 2552
e-mail: info@ican.org.uk
Website: www.ican.org.uk/

Royal College of Speech and Language Therapists (RCSLT)
The RCSLT is the professional body for speech and language therapists in the UK, providing leadership and setting professional standards.

Royal College of Speech and Language Therapists
2 White Hart Yard
London
SE1 1NX
Tel: 020 7378 3012
e-mail: info@rcslt.org
Website: www.rcslt.org/

Talking Point
Talking Point gives parents and carers the information they need to help their children develop communication skills.

Tel: 0845 225 4071
e-mail: help@talkingpoint.org.uk
Website: www.talkingpoint.org.uk/