



J & M Yeomans Limited  
Psychology and teaching

## Confidential diagnostic assessment report

**Name:**

**Gender:** Male

**Date of birth:**

**Age at assessment:** 14 years 2 months

**School:**

**Year group:** Year 9

**Address:**

**Name of assessor:** Dr Jane Yeomans

**Contact details of assessor:** J and M Yeomans Limited, 26, Wyckham Close, Birmingham B17 0TB.  
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**The assessor and author of this report:**

- Is a qualified psychologist and is Health and Care Professions Council (HCPC) registered.
- Certifies that this assessment has been conducted and the report written in accordance with the SpLD Assessment Standards Committee (SASC) current guidelines for diagnostic assessment and report writing.
- Has personally
  - (i) administered in a confidential face-to-face setting;
  - (ii) scored; and
  - (iii) interpreted all the tests used in this assessment.

**Name: (printed) DR JANE YEOMANS**

**Signature:**

**Date:**

**HCPC number:** PYL 21594

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# 1. Overview

## 1.1 Reason for referral and sources of information

The purpose of assessment was to provide information in order to consider whether X is experiencing any difficulties that might be consistent with a label of dyslexia/SpLD.

There is no one universally agreed definition of dyslexia. Four definitions are contained in Appendix Three, together with a definition of specific learning difficulty. However, there are some common areas of agreement about what might be examined in order to describe an individual's difficulties as 'dyslexia', and overall, the Rose Report definition is mostly drawn on because this report and subsequent publication was commissioned by and thus endorsed by, the UK Government.

This report has been written in accordance with the SpLD Assessment Standards Committee (SASC) current guidelines for diagnostic assessment and report writing. PATOSS<sup>1</sup> guidance was also consulted.

Sources of information were as follows:

- Discussion with Ms R (parent) via email
- Information supplied by Ms R via J and M Yeomans Limited SpLD checklist
- Current Education and Health Care Plan
- Statutory psychological advice provided by Ms H, trainee Educational Psychologist, report countersigned by Dr Aslam (Educational Psychologist)
- Report by Dr P (Aston University/ Aston Brain and MRI Centre)
- Speech and Language Therapy report dated
- Individual work with X carried out on

Technical terms marked \* are described in the Glossary (Appendix One)

Note: due to COVID restrictions, I have not worked with X in a school setting. I have therefore had no opportunity to observe him in a classroom environment.

Information requested from school was not available at the time of the assessment or subsequent compiling of this report.

## 1.2 Profile

X's developmental profile does not indicate any significant difficulties. There is no *significant* family history of dyslexia/SpLD. There has been no interruption or disruption in schooling (except for the recent COVID imposed school closures).

X has a diagnosis of an autistic spectrum condition. This was made in February 2017.

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<sup>1</sup> PATOSS: The Professional Association of Teachers of Students with Specific Learning Difficulties. See also Jones, A. and Kindersley, K. (2017). Dyslexia: Assessing and Reporting. The PATOSS Guide. London: Hodder Education.

Cognitive processing overall is weak. Attention Processing is the weakest area. Planning Processing is also weak, which is likely to affect study skills. X also achieved low scores for Executive Function and for the verbal content of the cognitive processing assessment. This assessment also highlighted low average working memory. However, both Successive and Simultaneous Processing are in the average range, suggesting some secure abilities in these areas. These aspects of cognitive processing are reflected in the reading process. For example, Das (2020) comments as follows: *'Successive process involves the identification of individual letters, the retrieval and storage of corresponding sounds in short-term memory, and the blending of sounds into serial order for the assembling pronunciation. Effects of simultaneous processing on word reading are mediated by orthographic processing of familiar words. Via a direct visual route, words are coded as holistic units because we know how to use visual and orthographic knowledge. This is obvious in sight reading. Both simultaneous and successive processing are combined and integrated during word reading.'* X's relative strengths in these areas lead to questioning why he is struggling with reading. I would suggest that one explanation is that X is not applying and using these skills to reading. As Das comments, both cognitive processes are *combined and integrated*. In addition, weaknesses in Planning and Attention Processes have a direct bearing on reading difficulty: *'good comprehenders should be able to maintain important information about the text while inhibiting irrelevant information and preventing distractions. Good readers use appropriate strategies for comprehension and shift their attention between text representations and their own experiences and feelings. Likewise, the ability to engage in comprehension monitoring and use strategies such as identifying the main idea and knowing when to reread or skim through a passage is critical for RC [reading comprehension]'* (Das, 2020).

X is struggling with all aspects of literacy: word reading, reading comprehension, reading fluency, written expression and spelling. His phonological processing skills are poor. He therefore has few skills to enable him to read text independently. Qualitative observations of his reading indicate that he adds and omits many words. However, he does not report any visual disturbance. Although not a specific focus of the present assessment, much of his handwriting is illegible and he does not yet use cursive script. These aspects of his performance have implications for writing during examinations.

X is experiencing difficulty with some aspects of language. Language was not a specific focus of the present assessment (except for the verbal content analysis of the CAS); however, information made available to me from Speech and Language Therapy indicates some language difficulties related to expressing emotions, asking for help, and understanding/using abstract language.

There are social, emotional and mental health (SEMH) factors that have a direct bearing on X's profile. Although his ratings of aspects of school are higher than average in the pupil views table (section 2.5.7, page 8), other information suggests that he does not have a very positive view of his learning. The *Myself As Learner* score is below average and some of his comments indicate that he is aware of his literacy difficulties. He has self-harmed in the past and is also reported to become quite dysregulated. The results of the Spence anxiety scale show an elevated score for generalised anxiety (but not for other areas, and the overall score is within the average range). However, evidence from the statutory psychological advice, the Speech and Language therapy report and from the Education and Health Care Plan indicates SEMH needs, especially related to sensory seeking behaviours as a

coping strategy, anxiety related to social situations and friendships, and more generally, feeling overwhelmed. It is possible that some SEMH difficulties might be related to literacy difficulties; for example, reports of X feeling overwhelmed might relate to literacy struggles. In addition, the diagnostic label of an autistic spectrum condition might be a contributory factor in relation to difficulties with social relationships and social understanding. However, irrespective of whether SEMH difficulties are directly attributable to literacy difficulties, anxiety and low self esteem are likely to affect X's ability to benefit from instruction (see further comments related to Maslow's hierarchy in section 1.4).

X has many strengths that should be recognised and celebrated:

- He is reported to be sociable;
- He is confident in his current setting at G School;
- He can build and create designs using Lego;
- The cognitive processing assessment indicates strengths in Successive and Simultaneous processing;
- Speech and Language assessment information indicates some secure aspects of his language development: he can recall sentences, define words and use/understand relationships between words; and
- His Education and Health Care Plan notes school feedback that X has positive relationships with staff and displays a good sense of humour,

### **1.3 Impact**

Ms R reports instances of self harming (when in Primary school) and anxiety. More recently, she reports that X has started to engage in repetitious word outbursts. X's Education and Health Care Plan also noted episodes of dysregulation. Ms R reports that X does not enjoy reading.

X's views, as reported in Section 2.5.9, should also be considered in relation to impact.

## 1.4 Diagnostic outcome

The results from the present assessment suggest that X's literacy difficulties are consistent with a label of dyslexia. The table below gives information obtained from the present assessment that meets the criteria for a diagnostic label of dyslexia that are alluded to in section 1.1 and described in detail in Appendix Three.

Criterion for diagnostic label of dyslexia	Criterion met?	Evidence
<b>Evidence of delayed attainments in literacy</b>	Yes	All WIAT composite scores for reading, written expression and spelling are below average.
<b>Problems with fluency and automaticity of skills</b>	Yes	Rapid symbol naming composite score in the CTOPP
<b>Slow processing speed</b>	Yes	CAS Planning Processing CTOPP Rapid Symbolic Naming
<b>Significant difficulties with phonological processing</b>	Yes	CTOPP phonological awareness score WIAT Pseudoword decoding score
<b>Working memory difficulties</b>	Yes	CAS working memory composite
<b>Evidence of response to intervention, suggesting that the difficulties persist despite access to targeted support using a 'well founded intervention'</b>	Yes	There is evidence of targeted intervention over a sustained period of time using evidence based programmes. X has received literacy support since Year 2 in Primary School.

Evidence also suggests that X is presenting with low self esteem and self concept<sup>2</sup>. These will affect his self efficacy. Self efficacy is related to self belief about one's competence: 'the belief in one's ability to influence events that effect one's life and control over the way these events are experienced'<sup>3</sup>. There are four key elements to self efficacy<sup>4</sup>:

- Mastery, where the individual has direct experience of success;
- Vicarious experiences, where the individual learns from those around him/her;
- Verbal persuasion, where the individual receives messages affirming their competence; and
- Emotional and psychological states.

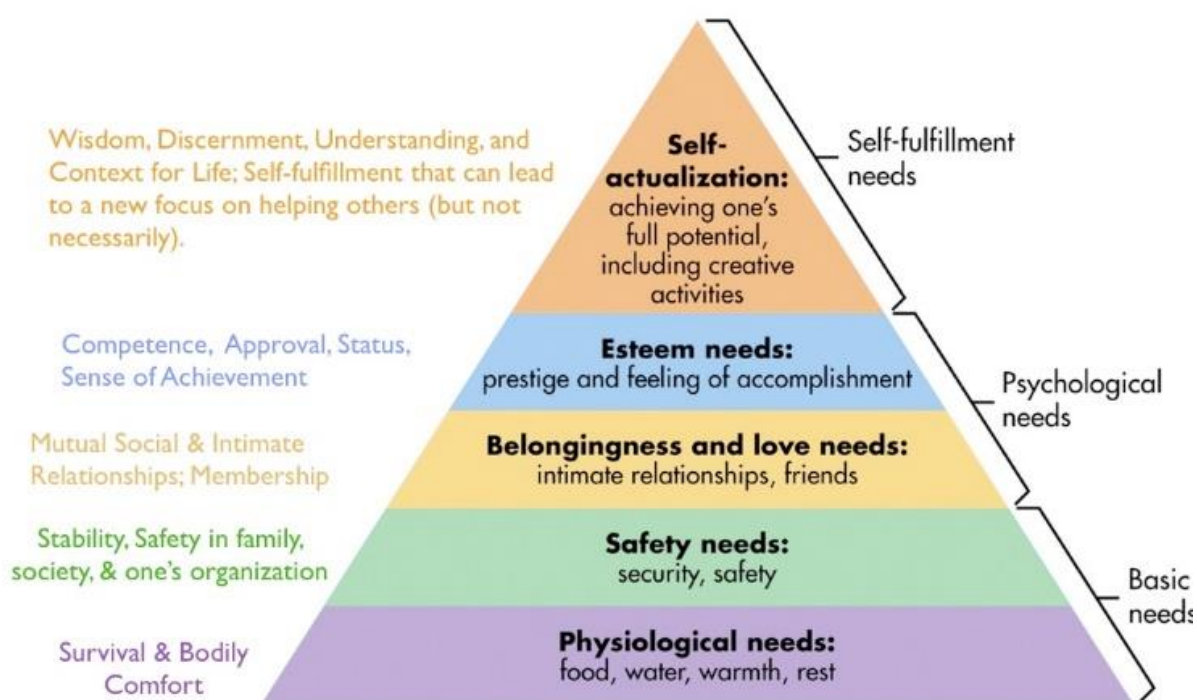
<sup>2</sup> *Self concept* is defined as knowledge and beliefs about oneself. *Self esteem* is defined as the value that the individual places on their characteristics, abilities and behaviours, so is overall a judgement of one's self worth.

<sup>3</sup> Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). New York: Academic Press. (Reprinted in H. Friedman [Ed.], *Encyclopedia of mental health*. San Diego: Academic Press, 1998).

<sup>4</sup> Bandura, A. (1997). Self-efficacy. *The exercise of control*. New York:

Psychological theory (for example, Maslow, see diagram below) suggests that the individual's self esteem needs and feelings of belonging have to be met before other, higher order needs can be met, related to what is called self actualisation, or being able to do the best that the individual can do. Therefore, improvements in academic self concept/self esteem/self efficacy likely to be needed in order to lay a secure foundation for improvements in attainment.

## Maslow's Hierarchy of Needs



### 1.5 Key recommendations

Recommended provision takes the form of structured individual support and targeted support.

**Structured individual support** is Wave 3 provision that should be delivered a *minimum* of three times per week but ideally daily.

**Targeted support** is Wave 1 Quality First Teaching provision that should be delivered in some form in all subjects throughout the school day.

- A structured individual literacy acceleration programme that delivers systematic teaching of phonic skills, together with opportunities to practise and generalise skills through reading of text;
- A structured individual reading comprehension programme;
- A structured individual spelling programme;
- A structured individual anxiety reduction/self esteem programme;

- Targeted support for written expression;
- Targeted support for study skills that focus on applying his cognitive processing strengths and which address areas of weakness such as planning and reading for meaning
- Targeted support in order to improve aspects of cognitive processing, particularly planning/organisation, attention and Executive Function;
- Targeted support in order to support poor working memory;

A range of strategies, approaches and programmes are suggested in Section 7. These should assist school and home in implementing the above key recommendations. Assistive technology will be an important element of provision (see recommendations for school in section 7.2 and for home in section 7.4).

## **2. Background information**

### **2.1 Health and developmental history**

No health concerns or issues reported, except for childhood eczema.

X was given a diagnosis of an autistic spectrum condition in 2017.

### **2.2 Family history of SpLD or other developmental conditions**

No family history of SpLD or other developmental conditions is reported. Ms R queried dyslexia in relation to X's father but I am not aware that any formal diagnosis has been made.

### **2.3 Linguistic history**

Ms R reports that speaking in sentences was delayed.

### **2.4 Educational history**

X attended C Infant School and L Junior School. He transferred to G School from Year 7 onwards. His difficulties were identified in Year 2, He was seen by the Local Authority Pupil Support Service. X has an Education and Health Care Plan. It was issued in February 2021 by Y Local Authority and it names G School as his placement.

### **2.5 Current situation**

#### **2.5.1 Literacy**

Information from X's EHC Plan and from Ms R indicates that X has experienced literacy difficulties since Year 1. He is known to the specialist teacher at G School and is accessing additional literacy support in school. He uses Clicker-7 and a scribe to support literacy.

#### **2.5.2 Numeracy**

Maths attainments are reported to be better than literacy, but slow processing speed affects his access to the maths curriculum. Ms R reports that anxiety also affects performance in Maths.



### 2.5.3 Memory, attention and concentration

Ms R describes X's memory as 'outstanding'.

Attention and concentration are poor. Concentration is dependent on the topic, and he struggles to maintain task focus in school, despite small teaching groups (maximum 15 pupils).

### 2.5.4 Speech, oral language and communication

There are no problems with speech production. Recent Speech and Language Therapy assessment highlighted some difficulties related to understanding and using abstract language and in concepts and following directions (a subtest from the CELF: Clinical Evaluation of Language Foundations). X also struggles with aspects of social communication.

### 2.5.5 Social skills

Ms R reports that X has a few close friendships. He struggles in larger groups. Information from the Speech and Language Therapy assessment indicates that he finds it difficult to join conversations, handle disagreements and contribute in class discussions.

### 2.5.6 Organisation

Ms R describes X's organisational skills as poor. He cannot recall basic daily routines. His life skills are improving but require prompting and support.

### 2.5.7 Pupil views

I asked X to rate aspects of school on a 0 to 10 scale, 0 being the worst things have ever been and 10 being the best. His ratings and comments are shown in the table below:

Aspect of school	Rating	Comment
Overall liking of school	9	
Reading ability	7	I'm good but not the best
Enjoyment of reading	8	I read at school. I read Warhammer stories
Spelling ability	5	
Enjoyment of spelling and writing	8	I don't like it that much. I'm not so good at making work readable
Maths ability	8	
Enjoyment of maths	8	

X reported that he has chosen art, history and design and technology as his option subjects.

He reported that he is given extra time in examinations.

At home X is particularly interested in Lego.

When asked, X did not express any specific post school aspirations in relation to Further/Higher Education or any career choices.

X's views about learning were also elicited using the Myself As Learner Scale (MALS). This is a self report scale that examines academic self concept and general views about learning. 70 is the average score for this measure. X scored 63.

Anxiety was assessed using the Spence Children's Anxiety Scale. This is a self report scale that looks at a number of different aspects of anxiety. The results obtained were as follows:

- Obsessive compulsive disorder: within average range
- Social phobia: within average range
- Panic agoraphobia: within average range
- Separation anxiety: within average range
- Physical injury fears: within average range
- Generalised anxiety: elevated

**Total:** T score\*: 48, Percentile\*45, score range: average

### **2.5.8 Parent views**

Parents report that X presents with the following strengths:

- Art, science and history; and
- Lego creations.

Parents report that X presents with the following needs:

- Reading, writing, spelling;
- Processing speed; and
- Difficulty staying on task, remaining engaged.

Ms R also commented that X is a wonderful confident young man since moving to GSchool.

## **3. Test conditions**

Individual assessment was carried out at a COVID secure Educational Psychology office location. The assessment took place in a quiet room with no other adults or peers present. X was accompanied by his mother. She waited in an anteroom next door to the room where the assessment was carried out. X was happy work with me. He did not present as being at all anxious about taking part in the assessment activities. He was cooperative throughout.

## 4. Cognitive profile

### 4.1 Cognitive processing assessment

Dyslexia is now thought to occur across all intellectual abilities; therefore, a diagnosis that uses a discrepancy model (where diagnosis is based on there being a discrepancy between literacy attainments and underlying abilities) is neither a valid nor a reliable approach<sup>5</sup>. In the present assessment, underlying abilities are assessed using a model of cognitive processing (using the Cognitive Assessment System: CAS). This is used in preference to using tests of IQ (intelligence quotient) or general abilities because these tests are based on an assumption that abilities are fixed. This idea of fixed ability does not therefore help to make links between assessment and intervention. In contrast, a test such as the CAS examines cognitive processes (the processes are described in detail in Appendix Four), which are open to change and development and thus can contribute to both an understanding of the pupil's difficulties, and to identifying strategies and approaches for intervention.

#### 4.1.1 CAS results: core scales

Subtest	Scaled score*
Planned codes	5
Planned connections	8
Matrices	13
Verbal-spatial relations	7
Figure memory	12
Expressive attention	2
Number detection	7
Receptive attention	5
Word series	13
Sentence questions	9

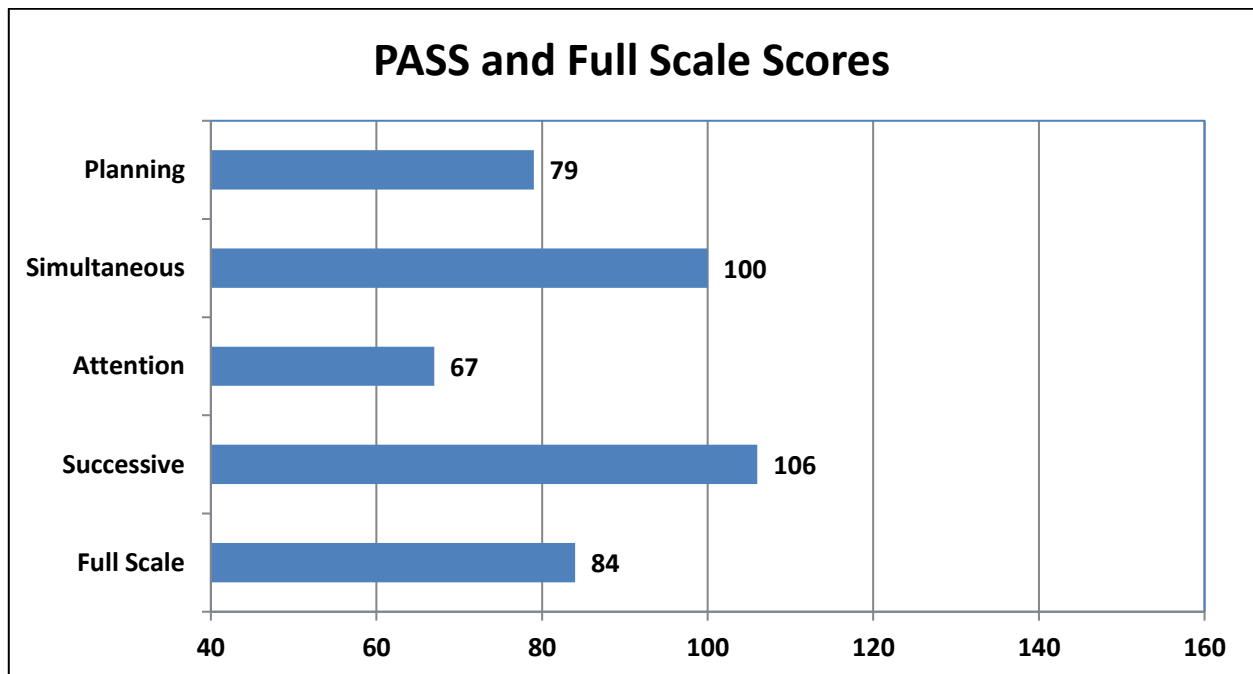
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<sup>5</sup>For example, Gunderson and Siegel (2001) comment: *'The fact that there is no difference in reading skills between children who have discrepancy and children with the same kind of problems but with no discrepancy should be a clue that the IQ test is not really useful. On other words, IQ does not predict the ability to benefit from remediation.....the use of IQ to define reading disability seems fatally flawed because it is confounded by socioeconomic status and age...therefore the use of IQ systematically discriminates against certain children.'*

**Composite scores: core scales**

<b>Area</b>	<b>Composite index* standard score*</b>	<b>Range of standard score at 95% confidence*</b>
<b>Planning</b>	79	72-90
<b>Attention</b>	67	61-82
<b>Simultaneous</b>	100	93-107
<b>Successive</b>	106	96-115
<b>Full scale (that is, the result of all four scales above combined)</b>	84	78-91

Results are shown in graph form below:



#### **4.1.2 Analysis and interpretation of CAS results**

Further statistical analysis of the PASS index scores was carried out. The difference between each index score was compared with the mean of all four index scores in order to determine whether any of the index scores are significantly higher or lower than X's overall level of performance. The purpose of this analysis is to identify processing strengths and weaknesses. The analysis suggested that Attention Processing is a significant weakness and Simultaneous and Successive Processing are significant strengths.

Other analyses of PASS scores are reported below.

##### **PLANNING SCALE**

X's Planning score reflects his ability to make decisions about how best to complete the tests, use strategies, monitor the effectiveness of strategies, change the plan when needed, and efficiently complete the tasks. X earned a Planning Scale score of 79, which is within the Poor classification and is a percentile rank of 8. This means that X did as well as or better than 8% of the adolescents in the standardisation group. There is a 95% probability that X's true Planning score is within the range of 72 to 90. There was a significant difference between the two subtest scores on this scale. The Planned Codes score of 5 was significantly lower than the Planned Connections score of 8.

##### **SIMULTANEOUS SCALE**

X earned a Simultaneous Scale score of 100, which was significantly above his average PASS score. This scale measures his ability to work with information that is organised into groups and form a cohesive whole and understand how shapes as well as words and verbal concepts are interrelated. X's Simultaneous score is within the Average classification and is a percentile rank of 50. This indicates that X did as well as or better than 50% of adolescents his age in the standardisation group. There is a 95% probability that X's true Simultaneous score is within the range of 93 to 107. This relatively high score may have educational implications because it suggests that this strength could be used to enhance learning through the use of instruction that emphasises visual-spatial organization of numbers, words, ideas or images. There was a significant difference between the two subtest scores on this scale. The Matrices score of 13 was significantly higher than the Verbal-Spatial Relations score of 7. It is possible that one factor which might account for the differences is the presentation of instructions. In Matrices there are few instructions, whereas in Verbal-Spatial relations there are different instructions for each task, that become increasingly complex. The instructions are delivered verbally, but the pupil also has access to written instructions. However, X's poor word reading and reading comprehension skills might have affected his ability to support verbal delivery by using of the text provided.

##### **ATTENTION SCALE**

X's Attention score was significantly lower than his average PASS score and below the average range. This means that X performed particularly poorly on tests that required focused thinking and resistance to distraction when given many stimuli to look at. X earned a CAS2 Attention Scale score of 67 which is within the Very Poor classification and is a percentile rank of 1.4. The percentile rank

indicates that X did as well as or better than 1.4% of others his age in the standardisation group. There is a 95% probability that X's true Attention score is within the range of 61 to 82. This cognitive weakness has important implications for curriculum access because adolescents who are weak on the Attention Scale often have problems focusing on what is important in school, at home, and on the playground. They also have difficulty working in environments containing visual and auditory distractions. There was a significant difference between the two subtest scores on this scale. The Expressive Attention score of 2 was significantly lower than the Number Detection score of 7.

### **SUCCESSIVE SCALE**

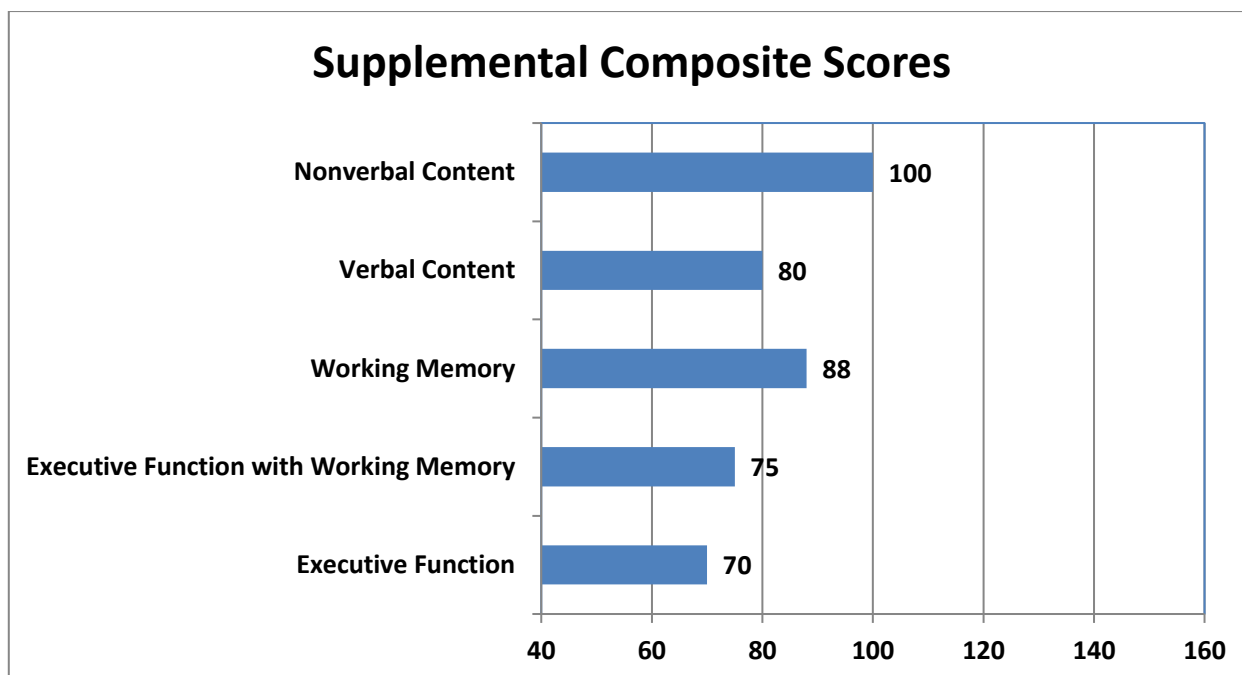
X earned a Successive Scale score of 106, which was significantly higher than his average PASS score. This means that X performed well on tests that required recall of information such as words or sentences in order and an understanding of verbal statements when the meaning was dependent on the sequence of the words. X's Successive score is within the Average classification and is a percentile rank of 66. This indicates that X did as well as or better than 66% of adolescents his age in the standardisation group. There is a 95% probability that X's true Successive score is within the range of 96 to 115. This strength has implications for educational programming because adolescents who are good in Successive processing can do well when required to remember information in order and understand verbal statements when the meaning depends on the sequence of words and ideas. There was a significant difference between the two subtest scores on this scale. The Word Series score of 13 was significantly higher than the Sentence Questions score of 9. This difference might have been due to difficulties in comprehension and processing verbal information, reflecting weakness in the Concepts and Following Directions subtest of the CELF (administered by Speech and Language Therapy).

### **SUPPLEMENTAL CAS2 COMPOSITES**

The CAS2 supports the calculation of five supplemental composite scores: Executive Function Without Working Memory, Executive Function With Working Memory, Working Memory, Verbal Content, and Nonverbal Content.

The results of the supplemental scales are show in the table and graph below.

<b>Area</b>	<b>Composite index* standard score*</b>	<b>Range of standard score at 95% confidence*</b>
<b>Working memory</b>	88	81-97
<b>Verbal content</b>	80	73-90
<b>Non verbal content</b>	100	92-108
<b>Executive function with working memory</b>	75	69-86
<b>Executive function without working memory</b>	70	64-84



#### **EXECUTIVE FUNCTION**

X's Executive Function score was substantially below the average range. This means that he performed particularly poorly on tests that required control of thinking, behaviour, and attention (Planned Connections and Expressive Attention). He obtained a score of 70 on Executive Function, which falls within the Poor classification and is a percentile rank of 2. The percentile rank indicates that X did as well as or better than 2% of others his age in the standardisation group. There is a 95% probability that X's true Executive Function score is within the range of 64 to 84. This low score may have educational implications, and further assessment may be warranted.

In Executive Function with working memory, X's score was lower than the average range. This means that he performed poorly on tests that required control of thinking, behaviour, and attention when working with information that had to be evaluated and remembered for a short period of time. He obtained a score of 75, which is within the Poor classification and is a percentile rank of 5. The percentile rank indicates that X did as well as or better than 5% of others his age in the standardisation group. There is a 95% probability that X's true score on this scale is within the range of 69 to 86. This low score may have educational implications, and further exploration may be warranted.

Appendix Seven contains more information about Executive Function.

#### **WORKING MEMORY**

X's Working Memory score was substantially below the average range. This means that he performed particularly poorly on tests that required evaluating and working with information that had to be remembered for a short period of time (Verbal-Spatial Relations and Sentence Questions). X obtained a Working Memory score of 88, which is within the Below Average classification and is a percentile rank of 21. The percentile rank indicates that X did as well as or better than 21% of others his age in

the standardisation group. There is a 95% probability that X's true Working Memory score is within the range of 81 to 97. This low score may have educational implications.

### **EXECUTIVE FUNCTION WITH WORKING MEMORY**

X's **Verbal Content** score was lower than the average range. This means that he performed poorly on tests that involved working with simple and more complex verbal concepts (Receptive Attention and Verbal-Spatial Relations) and understanding verbal statements when the meaning was derived from the sequence of the words (Sentence Questions). X earned a Verbal Content score of 80, which is within the Below Average classification and is a percentile rank of 9. The percentile rank indicates that X did as well as or better than 9% of others his age in the standardisation group. There is a 95% probability that X's true Verbal Content score is within the range of 73 to 90. This low score may have educational implications, and further exploration may be warranted.

X's score on the **Nonverbal Content** scale was within or close to the average range. This means that he performed about as expected on tests that involved reasoning with visual spatial designs (Matrices), devising and using strategies (Planned Codes), and remembering geometric shapes (Figure Memory) when the content of the tests did not include words. X earned a Nonverbal Content score of 100 on the Nonverbal Content scale, which is within the Average classification and is a percentile rank of 50. The percentile rank indicates that X did as well as or better than 50% of others his age in the standardisation group. There is a 95% probability that X's true Nonverbal Content score is within the range of 92 to 108.

## **4.2 Phonological processing and processing speed**

### **4.2.1 Results of CTOPP**

X's phonological skills were assessed using the Comprehensive Test of Phonological Processing – Second Edition (CTOPP-2).

#### **Subtest scores:**

<b>Subtest</b>	<b>Scaled score*</b>
<b>Elision</b>	8
<b>Blending words</b>	5
<b>Phoneme isolation</b>	2
<b>Memory for digits</b>	2
<b>Nonword repetition</b>	25
<b>Rapid digit naming</b>	1
<b>Rapid letter naming</b>	1



**Composite scores:**

<b>Composite*</b>	<b>Composite* standard score*</b>
<b>Phonological awareness</b>	88
<b>Phonological memory</b>	95
<b>Rapid symbolic naming</b>	52

**4.2.2 Analysis and interpretation of CTOPP results**

The results obtained show a mixed profile. Some aspects of phonological processing are secure, as evidenced by the scaled scores of 8 or above in some subtests. Rapid digit naming and rapid letter naming were the lowest scoring areas, leading to a rapid symbolic naming composite score in the very poor range. Rapid symbolic naming relates to the retrieval of phonological information from long term memory and the ability to be able to demonstrate quick repeated execution of a sequence of operations. Problems in this area suggest a greater risk of reading problems.

Phonological awareness composite is below average, suggesting that X has some difficulties related to awareness of and access to the phonological structure of oral language. Problems in this area suggest a greater risk of a reading disability/dyslexia.

In contrast, X's phonological memory is in the average range, suggesting that he has some skills relating to storage in short term and working memory.

**5. Attainments**

**5.1 Reading, including single word reading and prose reading**

**5.1.1 Norm referenced assessment of reading**

Norm referenced assessment of reading was carried out using subtests from the Wechsler Individual Achievement Test-Third UK Edition (2017). This is a norm referenced\* achievement\* test. The results were as follows:

**Subtest scores:**

<b>Subtest</b>	<b>Standard score* and range at 95% confidence*</b>
<b>Word reading</b>	53 (48-58)
<b>Pseudoword decoding</b>	72 (69-75)
<b>Reading comprehension</b>	66 (57-75)
<b>Oral reading fluency</b>	64 (57-71)

**Composite scores:**

<b>Composite area</b>	<b>Subtests that are used</b>	<b>Standard score* and range at 95% confidence*</b>
<b>Basic reading</b>	Word Reading Pseudoword Decoding	62 (58-64)
<b>Total reading</b>	Word Reading Pseudoword Decoding Reading Comprehension Oral Reading Fluency	62 (56-68)
<b>Reading comprehension and fluency</b>	Reading Comprehension Oral Reading Fluency	63 (53-73)

**5.1.2 Qualitative observations of reading: analysis and interpretation of reading results**

X chose to read the Reading Comprehension passages silently. Although this is not a timed test, he did appear to take a long time to read the passages. He did look back at the passages in order to answer the questions but did not take time to look again at the passage, and when he could not immediately find the answer, he said 'don't know'. He tended to read out chunks of text in response to questions. In the oral reading fluency passages (which are read aloud), his errors consisted of some additions and omissions. Analysis of substitutions indicated that there was a high level of graphic similarity; for example, 'dedicated' was read as 'decided' and 'products' was read as 'produce'. When questioned, X reported that he did not experience any visual disturbance when reading but he was aware that he missed out words.

Overall, the WIAT results suggest that X is experiencing severe difficulties with all aspects of reading, which in turn have significant implications for curriculum access and examination arrangements.

**5.2 Spelling and writing**

**5.2.1 Norm referenced assessment of spelling and writing**

Norm referenced assessment of spelling and writing was carried out using subtests from the Wechsler Individual Achievement Test-Third UK Edition (2017). The results were as follows:

**Subtest scores:**

<b>Subtest</b>	<b>Standard score* and range at 95% confidence*</b>
<b>Sentence Composition</b>	79 (68-90)
<b>Essay Composition (age 8 upwards)</b>	99 (87-110)
<b>Spelling</b>	64 (57-71)

**Composite scores:**

<b>Composite* area</b>	<b>Subtests that are used</b>	<b>Standard score* and range at 95% confidence*</b>
<b>Written Expression</b>	Alphabet Writing Fluency Spelling Sentence Composition Essay Composition	71 (64-78)

**5.2.2 Qualitative observations of spelling and writing and interpretation of results**

Much of X's handwriting was very difficult to read or completely illegible. He used print rather than cursive script. His pen grip was awkward.

Analysis of spelling errors suggested that he is spelling phonetically (for example, 'budget' was spelt 'bugit'; 'guitar' was spelt 'gitar'). All words did contain recognisable letter patterns. X did not always wait to listen to the sentence before writing down the target word, so his performance was affected by some impulsivity.

In the written expression subtests, he achieved a much higher score for sentence combining than for sentence building (standard score of 98 compared with a standard score of 63). Therefore, he performed better when he was given a structure to work with (as in sentence combining), as compared with being asked to formulate a sentence (as in sentence building). In both of the sentence composition subtests he lost marks due to spelling, punctuation and capitalisation errors (the pupil is reminded to make sure that these are correct when writing the sentences). In essay composition, he gained marks for the number of words written, but then achieved low scores for the theme, development and organisation elements of the task.

Although oral language was not assessed as part of the present assessment, some of the difficulties observed in written expression might be attributed to some language difficulties. The CELF test administered by Speech and Language Therapy indicated below average scores for concepts and following directions and for semantic relationships. Both of these subtests require the pupil to process and infer/interpret. Relating these oral language competencies to written expression, I would suggest that they reflect difficulties such as following the assignment brief or reflecting a serial order of ideas in writing. Written expression difficulties might also reflect organisational problems. X's mother reports that his organisational skills are poor, and the CAS results suggest delayed Planning Processing and Executive Function (EF) skills. Organisation is a key element of EF.

## 6. Confirmation of diagnostic decision

The results from the present assessment suggest that X's difficulties are consistent with a label of dyslexia/SpLD. See table in section 1.4, page 6.

## 7. Recommendations

There is no one universal approach for dyslexia intervention. Rather, effective teaching for dyslexia reflects principles of good practice instruction and a careful matching of assessment data with subsequent intervention. Some authors (for example, Reid [web source, see below] or Townend, 2000) suggest that there are a number of principles that should underpin effective intervention<sup>6</sup>:

- **Structure** – the progression should be logical and in small steps and importantly the links between the steps should be explicit.
- **A multisensory element** – this should be active and interactive as well as incorporating elements of all the modalities- visual, auditory, kinaesthetic and tactile.
- **Be reinforcing** – skills which are learnt need to be practiced, learned and preserved in long term memory. This can be achieved through reinforcement and is in fact necessary for automatic access of the word or skill which has been learnt.
- **Include skill teaching** – teaching is not only about providing information, but about accessing useful and transferable skills – for example phonological awareness skills can be later transferred and utilised in writing skills.
- **Incorporate metacognitive aspects** – this should be seen as an integral component of all programmes –this helps with bridging and transferring knowledge, understanding and skills. Essentially it involves thinking about thinking and the learners self-questioning of how a particular response was arrived at.

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<sup>6</sup> From: Reid, G. [www.drgavinreid.com](http://www.drgavinreid.com)

## 7.1 Access arrangements

Current JCQ regulations state that schools cannot use evidence from a privately commissioned assessment as the basis for access arrangements (JCQ Regulations section 7.3.6). Therefore, the content of this section is **advisory** only. The table below suggests the arrangements that might be considered.

Recommended access arrangement	Evidence from present assessment
A reader (in examinations for which a reader is permitted) or exam reader pen	Substantial reading difficulties: all aspects of reading show severe delay
A scribe	Spelling standard score 64; illegible handwriting
Rest breaks	Anxiety, overall impact of neurodiversity (ASC)
Extra time	Substantial difficulties in speed of reading (oral reading fluency standard score 64 and processing speed (rapid symbolic naming standard score 52)

## 7.2 Educational setting/instructional considerations

Principles of effective instruction are also important, particularly with reference to frequency of delivery of interventions. Research suggests (for example, Seabrook et al, 2005) that distributed practice (that is little and often) is much more effective than massed practice (for example, weekly sessions). In addition, X has already received structured individual input which although having some impact on progress, has not led to accelerated<sup>7</sup> progress. Therefore, frequent, **daily** delivery of interventions is indicated.

The evidence at my disposal from the present assessment leads me to recommend that there are five priority areas of need that should be addressed via universal and targeted support. These are:

- Literacy acceleration, particularly reading comprehension, written expression and spelling;
- Planning and organisation;
- Attention;
- Working memory; and
- Self esteem and anxiety.

X will benefit from ongoing provision of Quality First Teaching (QFT) in order to support all of the above areas.

The following strategies and approaches should be incorporated into QFT:

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<sup>7</sup> Accelerated progress is where progress over time, as measured by the increase in the pupil's age related score for a test, is greater than the increase in the pupil's chronological age. For example, an increase of 7 months in reading age over a 6 month period would be viewed as accelerated progress.

- Use follow up handouts supplied with the Cognitive Assessment System, taken from 'Helping Children to Learn'. (A copy is available in school). In particular, use the handouts about Planning Processing and Attention Processing from the PASS section, together with 'self monitoring for planning and attention problems', 'Improving attention', 'Nurturing strengths: Simultaneous Processing' and 'Nurturing strengths: Successive Processing'. In addition to incorporating strategies from these handouts into all lessons, planning should be a particular focus for study skills input. Resources related to Executive Function will be helpful in supporting the planning and organisational elements of study skills ('Executive Skills in Children and Adolescents' by Peg Dawson and Richard Guare is a useful resource);
- Use mind mapping (see for example, 'Mind Maps for children' by Tony Buzan) This might be a particularly useful strategy for subjects where written prose is required as part of the output;
- Use semantic mapping for teaching new vocabulary. This strategy involves: 'graphically displaying characteristics of words in categories and showing how they are related to each other' (Carnine et al);
- Careful choice of reading material. Use high interest, low reading level books. Suggested publishers are: Pandora books. ([www.pandorabooks.co.uk](http://www.pandorabooks.co.uk)), Ransom Publishing. ([www.ransom.co.uk](http://www.ransom.co.uk)), Badger Learning ([www.badgerlearning.co.uk](http://www.badgerlearning.co.uk)) and Barrington Stoke ([www.barringtonstoke.co.uk](http://www.barringtonstoke.co.uk));
- All subject teachers should do frequent checks of the level of difficulty of any reading material supplied. This can be carried out via an oral reading probe (see Glossary of technical terms in Appendix One) or readability formula check (this is generally part of word processing software). See also Appendix Six for information about inclusion friendly approaches to text and a worksheet checklist;
- Targeted support for written expression would benefit from using the SRSD approach. SRSD (Self Regulated Strategy Development) is a metacognitive approach to writing. See [www.thinksrsd.com](http://www.thinksrsd.com);
- Pre teaching of subject specific key vocabulary;
- Reduce the memory load by chunking instructions and information and by giving visual cues and supports. Be cautious about using memory training programmes, since these tend to just bring about an improvement in the skills taught in the programme (for example, recalling strings of digits or letters), but have little impact on functional memory (for example, Apter, 2013 and Melvy-Levag and Hulme, 2012). The publication Working Memory: A Classroom Guide (by Gathercole and Alloway) contains some useful advice; and

- Explicit teaching of reading related study and comprehension skills. For example, skimming and scanning of texts, highlighting key words, summarising. Teach X the SQ3R<sup>8</sup> approach so that he can use this independently when he needs to read and understand text.

X would benefit from the following Assistive Technology:

- Spell checker;
- Continued use of Clicker-7;
- Speech recognition software;
- Mind mapping software;
- Reader pen
- An immersive reader (software that can change font size, text spacing, and background colour, split up words into syllables, highlight verbs, nouns, adjectives and sub-clauses, choose between two fonts optimised to help with reading, read out text aloud, and change the speed of reading). For example, Microsoft One Note can be used with an immersive reader tool.

### **7.3 Individual/specialist teaching**

Multi sensory teaching is frequently emphasised in dyslexia interventions. Whilst it is important to take account of this element of instruction, it should also be noted that this is only one component, and that the overall evidence base for the effectiveness of multi sensory teaching as a specific intervention for dyslexia is relatively weak (see Appendix Eight for more information). Therefore, multisensory teaching should only be one small part of an overall structured strategy for accelerating X's progress in literacy. It is equally important that the principles listed at the beginning of Section 7 underpin individualised instruction that reflects particular aspects of attainments, progress and attitudes of the learner. The present assessment suggests that X requires structured, individual support for the following areas:

- Word recognition;
- Phonic skills;
- Reading comprehension;
- Spelling; and
- Self esteem and anxiety.

A key element of provision will be a structured, individual reading acceleration programme that teaches basic skills of reading (word recognition and phonics), combined with opportunities to read text, emphasising reading for meaning. Examples of such programmes are:

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<sup>8</sup> SQ3R is a reading comprehension strategy: **S**urvey the text, **Q**uestion, **R**ead, **R**ecite, **R**evue. A PATOSS information sheet was supplied with this report.

- ENABLE Plus KS3 (Bowen and Yeomans, published by Imaginative Minds)<sup>9</sup>;
- Wordshark ([www.wordshark.co.uk](http://www.wordshark.co.uk));
- Inference Training ([www.targetliteracy.co.uk/comprehension](http://www.targetliteracy.co.uk/comprehension));
- Direct Phonics ([www.directphonics.co.uk](http://www.directphonics.co.uk)); and
- Basic Reading for Secondary Students (a direct instruction programme, available from Metra Publishing, [www.metrapublishing.com](http://www.metrapublishing.com))<sup>10</sup>

The list above is not exhaustive but is based on the author's knowledge of the robustness of their evidence base. The publication by Greg Brooks: *What Works for Pupils with Literacy Difficulties?* is a helpful resource for identifying a suitable, evidence based approach for use in structured individual teaching. In addition, provision of high interest low reading level books as previously mentioned, will support structured teaching of basic skills.

Fluency and automaticity of skills is a crucial element of effective structured support. This might be achieved by ensuring that there are opportunities for overlearning, in conjunction with a mastery learning approach. A mastery learning approach emphasises accuracy and fluency in teaching skills. An accurate and fluent performance means that the learner is more likely to retain skills. Precision Teaching is a highly effective means of monitoring skill mastery and I would recommend that this is used. Staff at G School have received training in this approach.

Individual structured teaching for spelling might incorporate the following strategies:

- Use cued spelling (information has been supplied to school);
- The five-step spelling strategy is an effective, multisensory approach to improving spelling performance. The strategy should be taught explicitly to ensure that X understands the strategy and can implement it independently. A cue card presenting the five steps of the strategy is provided to the student. The five steps are (1) Say the word, (2) Write and say the word, (3) Check the spelling, (4) Trace and say the word, and (5) Write the word from memory and check it;
- Encourage a metacognitive approach to spelling by asking X to analyse spelling mistakes and identify the learning required, and to decide what he will change to ensure that he spells that word correctly in future; and
- Teach spellings in word families.

X also requires individual provision for social, emotional and mental health needs, in addition to individual specialist teaching for aspects of literacy as noted above. The programmes listed below are suggested types of provision that might be suitable; it should be emphasised that only one

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<sup>9</sup> Training and support for delivery of this programme can be provided by J and M Yeomans Limited. Dr Jane Yeomans is the co-author of this programme

<sup>10</sup> Training and support for delivery of this programme can be provided by J and M Yeomans Limited



programme should be delivered. The list below is not exhaustive but is based on the author's knowledge of the robustness of their evidence base.

- Drawing and Talking (a therapeutic input involving drawing, see [www.drawingandtalking.com](http://www.drawingandtalking.com)<sup>11</sup>);
- Starving the Anxiety Gremlin (Kate Collins-Donnelly);
- Talkabout for Teenagers: developing self awareness and self esteem (Alex Kelly: [www.alexkelly.biz](http://www.alexkelly.biz));
- Friends For Life (a social skills and resilience programme, which is already used in school)

## 7.4 Home

Encourage reading for pleasure using books about topics of interest. It might be useful to use an immersive reader; for example, provide a Kindle that supports Whispersync and immersive reading software, then download the Kindle text together with audible narration.

A number of organisations provide advice for parents about supporting a child with dyslexia:

- Nessy: [www.nessy.com](http://www.nessy.com)
- British Dyslexia Association: [www.bdadyslexia.org.uk](http://www.bdadyslexia.org.uk)
- Child Mind Institute: [www.childmind.org](http://www.childmind.org)

Support the development of Executive Function skills. The publication 'Smart but Scattered' by Peg Dawson and Richard Guare is a useful resource. See also information from the Harvard Centre for the Developing Child ([www.developingchild.harvard.edu/guide/a-guide-to-executive-fuction](http://www.developingchild.harvard.edu/guide/a-guide-to-executive-fuction))

Support study skills. The Study Skills Handbook by Stella Cottrell is a useful resource.

Use his interest and skills in Lego to reinforce planning and organisational skills, emphasising transferable skills to other aspects of daily life (such as organising study time, planning revision, planning an essay, cooking a meal).

Support anxiety management/self regulation. The following might be helpful:

- Set aside time for fun activities;
- Encourage X to use self management strategies such as breathing or visualisation;
- Young Minds ([www.youngminds.org.uk](http://www.youngminds.org.uk)) is a useful website with helpful advice for parents;
- Autism West Midlands is a further helpful source of support, where help can be accessed in order to manage anxiety that might arise from an autistic spectrum condition. See [www.autismwestmidlands.org.uk](http://www.autismwestmidlands.org.uk).

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<sup>11</sup> Dr Jane Yeomans is an accredited Drawing and Talking practitioner

## **8. Concluding comments**

X is a delightful young man with many strengths and interests. The present assessment has highlighted a number of challenges to his curriculum access and has suggested that his literacy difficulties are indicative of a diagnostic label of dyslexia. X has many positive qualities that will help him to meet and overcome the learning challenges that he is currently experiencing. It has been a pleasure to work with X and find out more about him.

## **Section 8: Appendices**

## Appendix One

### Glossary of technical terms used

**NOTE:** *Test results are a snap shot of performance at a particular point in time and should only be viewed as a broad indication of where a pupil stands in comparison with his or her peers.*

**Achievement test.** Also known as an attainment test, this type of test gives information about how much has been learned in a specific domain or curriculum area, for example, in literacy or numeracy.

**Composite score.** A composite score combines the scores from two or more subtests in order to give an average for a particular domain or subject area. For example, a reading composite score might be made up of the scores from subtests of word recognition and comprehension.

**Confidence interval.** A way of showing that a standard score obtained from a test has a range and not just one value. If a test score is reported as having a 95% confidence interval, this means that in 95 times out of 100, the score obtained by the pupil would fall within the range shown. This illustrates that test scores are not always precise and are subject to some error. For example, in a reading test a pupil might have a standard score of 54 + or – 7 at a confidence interval of 95%. This means that on 95 occasions out of 100 the pupil's score would fall in the range 47 (54-7) to 61 (54+7).

**Norm referenced assessment.** Norm referenced assessment compares a pupil's performance in specific skills with that of other pupils of the same age. This test gives scores as standard scores, age equivalent scores and percentile scores.

**Oral reading probe.** This is a means of assessing reading accuracy, that is, the amount of text read correctly. For example, a reading accuracy score of 90% would mean that the pupil would make 10 mistakes for each 100 words read. An oral reading probe is carried out by asking the pupil to read from a given text (often his or her current reading book) for two minutes. A note is made of errors, words read correctly and total words read. A reading accuracy score is then calculated using these figures (words read correctly divided by total words read, multiplied by 100). Reading accuracy is divided into three bands:

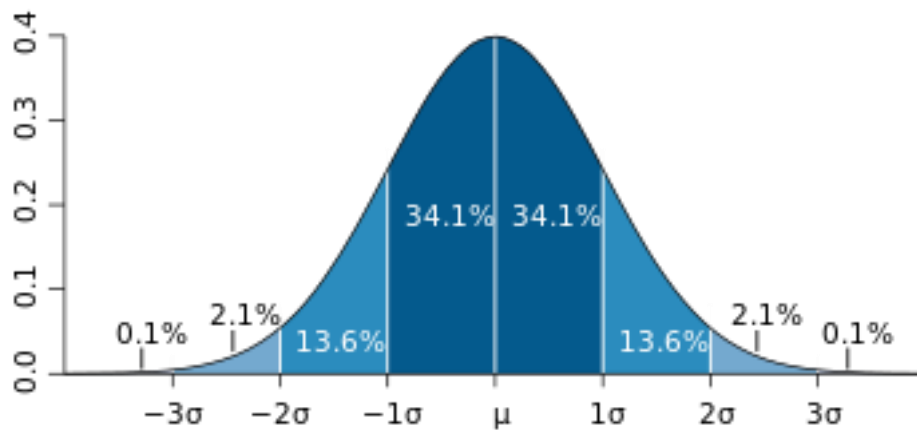
- **Independent:** Accuracy between 95 and 99%;
- **Instructional:** Accuracy between 90 to 95%. The instructional level means that the text should be read with support; and
- **Frustration:** Accuracy below 90%. This means that the text is too difficult.

**Percentile score.** A score that shows the percentage of pupils of similar age in the sample used for standardising the test that would be expected to obtain the same score or a lower score. Percentile scores in the range from 25 to 75 would be considered as representing average performance.

**Scaled score.** A scaled score is a type of standard score. Scaled scores in the range 8 to 12 would be considered as representing average performance.

**Standard deviation.** Standard deviation tells us about how data are spread out around the mean, or

the average. The bell curve (called a normal distribution) is commonly seen in statistics as a tool to understand standard deviation. This is illustrated below. The mean, or average, is represented by the Greek letter  $\mu$ , in the centre. Each segment (coloured in dark blue to light blue) represents one standard deviation away from the mean. For example,  $2\sigma$  means two standard deviations from the mean.



**Standard score.** A standard score is where scores are placed on a normal distribution, which means that two thirds of the population would obtain a score between 85 and 115. Standard scores in this range would be considered as representing average performance.

## Appendix Two

### Summary table of test results

#### Subtest scores

Subtest	Scaled score
<b>Cognitive Assessment System subtests</b>	
Planned codes	5
Planned connections	8
Matrices	13
Verbal-spatial relations	7
Figure memory*	12
Expressive attention	2
Number detection	7
Receptive attention	5
Word series	13
Sentence questions	9
<b>CTOPP subtests</b>	
Elision	5
Blending words	11
Phoneme isolation	8
Memory for digits	8
Nonword repetition	10
Rapid digit naming	3
Rapid letter naming	1

<b>WIAT subtests</b>	
<b>Subtest</b>	<b>Standard score*</b>
Word reading	53
Pseudoword decoding	72
Reading comprehension	66
Oral reading fluency	64
Sentence Composition	79
Essay Composition (age 8 upwards)	80
Spelling	64

**Composite area scores**

<b>Composite area</b>	<b>Composite* standard score*</b>
Planning Processing	79
Attention Processing	67
Simultaneous Processing	100
Successive Processing	106
Working memory	88
Verbal content	80
Non verbal content	100
Total Reading	62
Basic Reading	62
Reading comprehension and fluency	63
Written expression	71

Score classifications (figures in columns refer to standard scores). The red outlined area indicates average range of scores).

	69 or less Well below average	70-84 Below average	85-89 Low average	90-110 Mid average	111-115 High average	116-130 Above average	131 and above Well above average
Planning Processing							
Attention Processing							
Simultaneous Processing							
Successive Processing							
Working memory							
Verbal content							
Non verbal content							
Phonological awareness							
Phonological memory							
Rapid symbolic naming							
Total reading							
Basic reading							
Reading comprehension and fluency							
Written expression							
Spelling							



## Appendix Three

### Definitions of dyslexia and Specific Learning Difficulty

#### Dyslexia definitions

'Dyslexia is evident when accurate and fluent word reading and/or spelling develops very incompletely or with great difficulty. This focuses on literacy at the word level and implies that the problem is severe and persistent despite appropriate learning opportunities.' ***Dyslexia, Literacy and Psychological Assessment, 1999 Report of the Working Party of the DECP of British Psychological Society (BPS)***

'Dyslexia is a specific learning difficulty which mainly affects the development of literacy and language-related skills. It is likely to be present at birth and to be lifelong in its effects. It is characterised by difficulties with phonological processing, rapid naming, working memory, processing speed, and the automatic development of skills that may not match up to an individual's other cognitive abilities. It tends to be resistant to conventional teaching methods, but its effects can be mitigated by appropriately specific intervention, including the application of information technology and supportive counselling.' ***British Dyslexia Association (BDA)***

'Dyslexia is a specific learning difficulty that mainly affects reading and spelling. Dyslexia is characterised by difficulties in processing word-sounds and by weaknesses in short-term verbal memory; its effects may be seen in spoken language as well as written language. The current evidence suggests that these difficulties arise from inefficiencies in language-processing areas in the left hemisphere of the brain which, in turn, appear to be linked to genetic differences'. ***Dyslexia Action***

'Dyslexia causes difficulties with learning to read, write and spell. Short-term memory, mathematics, concentration, personal organisation and sequencing may also be affected. Dyslexia can occur at any level of intellectual ability. It is not the result of poor motivation, emotional disturbance, sensory impairment or lack of opportunities; but it may occur alongside any of these. Dyslexia usually arises from a weakness in the processing of language-based information. Biological in origin, it tends to run in families, but environmental factors also contribute. The effects of dyslexia can be largely overcome by skilled specialist teaching and the use of compensatory strategies. People may be born with dyslexia or acquire it through accident or illness'. ***Inclusion Development Programme 2008***

'Dyslexia is a learning difficulty that primarily affects the skills involved in accurate and fluent word reading and spelling. Characteristic features of dyslexia are difficulties in phonological awareness, verbal memory and verbal processing speed. Dyslexia occurs across the range of intellectual abilities. It is best thought of as a continuum, not a distinct category, and there are no clear cut-off points. Co-occurring difficulties may be seen in aspects of language, motor co-ordination, mental calculation, concentration and personal organisation, but these are not, by themselves, markers of dyslexia. A good indication of the severity and persistence of dyslexic difficulties can be gained by examining how the individual responds or has responded to well founded intervention.' ***Rose Report***

## Specific learning difficulty definition

DSM-5 criteria state that<sup>12</sup>:

A learning disorder can only be diagnosed after formal education starts. To be diagnosed with a specific learning disorder, a person must meet four criteria:

1) Have difficulties in at least one of the following areas for at least six months despite targeted help:

- Difficulty reading (e.g., inaccurate, slow and only with much effort)
- Difficulty understanding the meaning of what is read
- Difficulty with spelling
- Difficulty with written expression (e.g., problems with grammar, punctuation or organization)
- Difficulty understanding number concepts, number facts or calculation
- Difficulty with mathematical reasoning (e.g., applying math concepts or solving math problems)

2) Have academic skills that are substantially below what is expected for the child's age and cause problems in school, work or everyday activities.

3) The difficulties start during school-age even if in some people don't experience significant problems until adulthood (when academic, work and day-to-day demands are greater).

4) Learning difficulties are not due to other conditions, such as intellectual disability, vision or hearing problems, a neurological condition (e.g., paediatric stroke), adverse conditions such as economic or environmental disadvantage, lack of instruction, or difficulties speaking/understanding the language.

A diagnosis is made through a combination of observation, interviews, family history and school reports. Neuropsychological testing may be used to help find the best way to help the individual with specific learning disorder.

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<sup>12</sup> Information taken from the American Psychiatric Association website: [www.psychiatry.org](http://www.psychiatry.org)

## **Appendix Four**

### **Descriptions of tests used**

#### **The Cognitive Assessment System (CAS)**

The Cognitive Assessment System (CAS) is a norm referenced assessment of four areas of cognitive processing. The theory that underpins this test is that intellectual functioning is the interaction between a person's store of basic knowledge and his or her ability to plan, pay attention, and process (simultaneously or successively). The four areas of cognitive processing examined in the CAS are as follows:

- **Planning:** a cognitive process requiring the individual to determine, select, and use a strategy to solve a problem. The individual develops a plan of action, monitors its effectiveness, revises the plan as things change and controls impulses so that they think before acting;
- **Simultaneous:** a cognitive process involving integrating separate stimuli into a single whole or group;
- **Attention:** a cognitive process requiring the individual to selectively attend to a particular stimulus and inhibits attending to competing stimuli; and
- **Successive:** a cognitive process requiring the serial ordering of things, so order and sequence are important.

Each of the four areas is assessed using a minimum of two subtests (core scale) and a maximum of 12 subtests (extended scale; subtests in the extended scale are indicated by a \* in the table below). The overall scores are called PASS scores (Planning, Attention, Simultaneous, Successive).

The CAS2 was standardised on a sample of 4,142 children aged 4 to 18 years. The standardisation was carried out in the USA using data from the 2013 census in order to take account of factors such as race, gender, family income, parental education and geographic region. Although the CAS2 does not assess academic skills taught in the classroom, and thus will not reflect the content of the USA education system or curriculum, it should nevertheless be borne in mind that this test is not standardised on a UK sample of children and thus some caution is advised in interpreting the results.

The table below summarises the areas and the subtests that make up each area, and the scaled score obtained from the present assessment.

Subtests	Description
<b>PLANNING</b>	
<b>Planned codes</b>	The pupil has to identify the correct code matched to a letter (for example, A is matched with XO), under timed conditions.
<b>Planned connections</b>	The pupil has to connect up numbers in the correct sequence, under timed conditions.
<b>SIMULTANEOUS</b>	
<b>Matrices</b>	The pupil is shown a set of four designs in a 2 x 2 matrix. The fourth design is missing. The pupil has to identify how the first two designs go together and then apply this relationship to choose the correct design that goes with the third design.
<b>Verbal-spatial relations</b>	The pupil is shown items containing six drawings and a printed question at the bottom of each page. The items involve both objects and shapes that are arranged in a specific spatial manner. For example, the item: "Which picture shows a circle to the left of a cross under a triangle above a square"? would include six drawings with various arrangements of geometric figures, only one of which matches the description.
<b>Figure memory*</b>	The pupil is shown a two or three dimensional figure for five seconds. After the figure is removed s/he is given a more complex figure in which the original figure is embedded. The pupil has to draw the original figure by drawing over the lines of the second figure
<b>ATTENTION</b>	
<b>Expressive attention</b>	The pupil is shown colour words, written in different colours. The pupil has to say the colour that the word is written in. For example, the correct answer for <b>green</b> would be red
<b>Number detection</b>	This subtest consists of pages of numbers that appear in different formats. On each page the pupil is required to find a particular stimulus (the number 1, 2, and 3 printed in an open font) on a page containing many distracters (that is, numbers other than 1 and 2).
<b>Receptive attention</b>	This subtest requires the pupil to underline pairs of letters, using different criteria (appearance and then letter name)

SUCCESSIVE	
<b>Word series</b>	This subtest requires the pupil to repeat words in the same order as stated by the examiner.
<b>Sentence questions</b>	This subtest requires the pupil to answer questions about sentences that are read aloud. Each sentence is composed of colour words (for example, "The blue is yellowing") but they do not have any meaning.

## The Comprehensive Test of Phonological Processing (CTOPP)

The Comprehensive Test of Phonological Processing – Second Edition (CTOPP-2) which is a norm referenced test\* designed to assess phonological awareness, phonological memory, and rapid naming. The CTOPP was standardised using a sample of 1,900 individuals aged 4 to 24 years in six states of the United States of America in 2008 and 2009.

The CTOPP manual identifies four uses for this test:

- To identify individuals who are below their peers in important phonological abilities;
- To determine strengths and weaknesses among developed phonological processes;
- To document individuals' progress in phonological processing as a consequence of special intervention; and
- To serve as a measurement device in research studies investigating phonological processing.

CTOPP manual, page 10.

The subtests are described in the table below.

Subtest	Description
<b>Elision</b>	Removing phonological segments from spoken words to form other words
<b>Blending words</b>	Putting sounds together to form words
<b>Phoneme isolation</b>	Saying individual sounds that make up words
<b>Memory for digits</b>	Repeating numbers accurately
<b>Nonword repetition</b>	Repeat non words accurately
<b>Rapid digit naming</b>	Rapidly name digits
<b>Rapid letter naming</b>	Rapidly name letters

The subtest scores from the CTOPP can be used to make composite scores. Composite areas are described in the table below.

<b>Composite</b>	<b>Subtest scores used</b>	<b>Description</b>
<b>Phonological awareness</b>	Elision Blending words Phoneme isolation	Awareness of sounds, being able to identify words and sounds and being able to manipulate sounds
<b>Phonological memory</b>	Memory for digits Nonword repetition	Storing and working with auditory information
<b>Rapid symbolic naming</b>	Rapid digit naming Rapid letter naming	Retrieving phonological information from long term memory

### **The Wechsler Individual Achievement Test-Third UK Edition (2017; WIAT-III<sup>UK</sup>)**

The Wechsler Individual Achievement Test-Third UK Edition (2017) is a norm referenced test that measure achievement in a range of basic skills of listening, speaking, reading, writing and mathematics. It was standardised on a sample of 744 children and young people aged 4 years 0 months to 25 years 11 months, based on the 2011 census. There are 16 subtests in total that examine aspects of performance in the above skill domains. The subtests used in the present assessment are described in the table below.

<b>Subtest</b>	<b>Description</b>
<b>Reading Comprehension</b>	The student reads a range of passages to themselves or out loud, then respond to literal and inferential comprehension questions
<b>Sentence Composition: Sentence Combining</b>	The student combines two or more sentences into a single sentence with the same meaning.
<b>Sentence Composition: Sentence Building</b>	The student writes a sentence containing a target word.
<b>Word reading (ages 6 upwards)</b>	The student reads aloud from a list of words which increase in difficulty
<b>Essay Composition (age 8 upwards)</b>	The student has 10 minutes in which to compose an essay on a specific topic.
<b>Pseudoword decoding (age 6 upwards)</b>	The student reads a series of artificial 'non-words' from a card

<b>Oral Expression: Sentence Repetition</b>	The student repeats sentences of increasing complexity
<b>Oral Reading Fluency (age 6 upwards)</b>	The student is timed reading age appropriate passages out loud with their understanding checked by a question
<b>Spelling</b>	The student spells a target word that is read on its own and within a sentence.

Subtest scores can be combined to produce composite scores for reading, mathematics, language and written expression, as shown in the table below:

<b>Composite area</b>	<b>Subtests that are used</b>
<b>Basic reading 6-17+</b>	Word Reading Pseudoword Decoding
<b>Total reading 6-17+</b>	Word Reading Pseudoword Decoding Reading Comprehension Oral Reading Fluency
<b>Reading comprehension and fluency 7-17+</b>	Reading Comprehension Oral Reading Fluency
<b>Written Expression</b>	Alphabet Writing Fluency Spelling Sentence Composition Essay Composition

## Appendix Five

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## Appendix Six

### Inclusion friendly text strategies

The material below is taken from:

Reid, G. (2020). *Dyslexia and Inclusion : Classroom Approaches for Assessment, Teaching and Learning*. London: Routledge (Third edition).

## Inclusion Friendly Approaches: Text

- Use short sentences
- Ensure you use familiar words
- Restrict technical words eg 'acute' in Maths or 'symmetry' in biology.
- If using these words provide definition and examples
- Give a step by step explanation of the ideas underpinning the text.
- Use coloured paper – use different colours for the font and background
- Spread out the text in the page
- Do not crowd the page.
- Use headings and sub headings to divide the text.
- Background discussion on the text with a buddy is useful – eg what do they know about the topic and where can they find out more.
- Consider font size and font style – the layout of the information is important and intersperse with visuals where possible.

### Worksheet Checklist

Have small steps been used?

Are the sentences short?

Is the vocabulary easy to understand?

Have visuals been used?

Has large print been used?

Is the font style appropriate?

Has enough attention been given to presentation?

Are there opportunities for self-monitoring and self-correction?

Are the tasks within the child's comfort zone?

Is there a variety of different types of tasks?

Are there opportunities for group work as well as individual work?

## Appendix Seven

### Information about Executive Function

There is not one universally agreed definition of EF; however, there is general agreement that there are three main factors involved: self regulation, cognitive flexibility and working memory. The importance of EF is emphasised by Diamond and Lee (2011)<sup>13</sup>: *'(EFs), the cognitive control functions needed when you have to concentrate and think, when acting on your initial impulse would be ill advised. EFs depend on a neural circuit in which prefrontal cortex is central. Core EFs are cognitive flexibility, inhibition (self-control, self-regulation), and working memory. More complex EFs include problem-solving, reasoning, and planning. EFs are more important for school readiness than is IQ. They continue to predict math and reading competence throughout all school years.'* (page 959). Diamond and Lee also suggest that social and emotional development can affect EF.

#### Executive functioning skills that play a role within the classroom (Dawson and Gere: Executive Skills in Children and Adolescents)

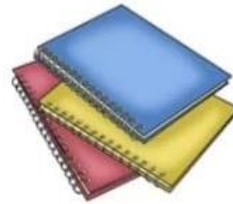
Executive Function	Role within the Classroom
<b>Flexibility</b> (Ability to adapt, improvise and shift approaches)	Helps pupils to correct and overcome mistakes
<b>Sustained attention</b> (Ability to maintain focus, even in the presence of distractions)	Helps with on-task behaviour within the noisy classroom environment
<b>Regulation of affect</b> (Ability to manage feelings appropriately)	Helps pupils to manage their frustration whilst completing challenging work
<b>Working memory</b> (Ability to remember information and apply it appropriately)	Helps with reading comprehension, task and homework recall, mental maths skills
<b>Response inhibition</b> (Ability to delay an action or response)	Helps with turn taking and peer relations
<b>Metacognition</b> (Ability to self-monitor and observe)	Helps pupils to correct their work and undertake self-assessment of their learning

<sup>13</sup> Diamond, A. and Lee, K. (2011). Interventions shown to Aid Executive Function Development in Children 4–12 Years Old. *Science*, 333(6045): 959–964.

# Executive Functioning Skills



**Planning** is the ability to figure out how to accomplish our goals.

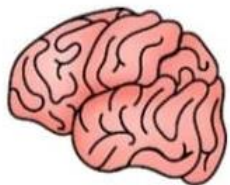


**Organization** is the ability to develop and maintain a system that keeps materials and plans orderly.

**Time Management** is having an accurate understanding of how long tasks will take and using time wisely and effectively to accomplish tasks.



**Task Initiation** is the ability to independently start tasks when needed. It is the process that allows you to just begin something even when you don't really want to.



**Working Memory** is the mental processes that allow us to hold information in our minds while working with it.



**Metacognition** is being aware of what you know and using that information to help you learn.

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2 SUCCESS

**Self-Control** is the ability to regulate yourself, including your thoughts, actions, and emotions.



**Attention** is being able to focus on a person or task for a period of time and shifting that attention when needed.



**Perseverance** is the ability to stick with a task and not give up, even when it becomes challenging.



**Flexibility** is the ability to adapt to new situations and deal with change.

[www.thepathway2success.com](http://www.thepathway2success.com)

## Appendix eight

### Further information about multisensory teaching

Multisensory teaching means using two or more of our senses in order to access learning. These senses are:

- **Visual** - learning through watching and seeing;
- **Auditory** - learning through listening and hearing sounds;
- **Kinaesthetic** - learning through physical activity or body movement (this involves the vestibular and proprioceptive senses);
- **Tactile** - learning through using the sense to touch;
- **Olfactory** and **Gustatory** - learning through smell and taste.

*'The multisensory teaching method involves at least two or more of these different sensory learning styles. In recent years, the learning styles idea has been shown to be problematic as many classrooms took this out of context and started labelling children with their 'preferred learning style.' Research indicates that a multi-sensory approach engages more of the brain, resulting in superior learning outcomes. Students can learn by hearing, seeing, touching and doing activities which use their hands and bodies. With this approach, students are better able to interpret, comprehend and synthesize information better as they can use more than one sensory input to make connections between facts or understanding. This improves comprehension skills significantly as well as having other lasting benefits such as increased motivation.'*<sup>14</sup>

Effective teaching and learning should involve multisensory approaches as a matter of routine good practice pedagogy. However, when these approaches are related specifically related to dyslexia, the evidence of impact is very weak. One of the reasons is that it is not really possible to isolate and evaluate the impact of the multisensory element of instruction alone. Therefore, caution is needed when recommending a multisensory approach as a universal 'solution' for a diagnosis of dyslexia. However, there is evidence that a multisensory approach can be helpful for phonics instruction<sup>15</sup>. Give that weakness in phonics is a key characteristic of a dyslexic profile, it might be suggested that a multisensory approach to this element of instruction will assist the pupil to make progress. What is potentially problematic is overreliance on multisensory approaches where the approach is positioned as the *only* way to support dyslexia and where multisensory approaches are recommended without reflecting the individual profile of the learner's strengths and areas of difficulty. As already noted at

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<sup>14</sup> Source: Structural learning, [www.structural-learning.com](http://www.structural-learning.com)

<sup>15</sup> See for example, <https://www.readingrockets.org/topics/curriculum-and-instruction/articles/phonics-instruction-value-multi-sensory-approach>; Magpuri-Lavell et al, 2014.

the beginning of Section 7, instructional considerations are fundamental to the effectiveness of any intervention. Therefore, the instructional context for delivering a multisensory approach is crucial.

The idea of multisensory teaching for dyslexia has its foundation in the work of Orton and Gillingham, carried out in the 1930s. Their work continues to underpin many dyslexia interventions. Orton and Gillingham suggested a number of principles for dyslexia teaching, as follows:

- Diagnostic and prescriptive
- Individualised
- Language based and alphabetic/phonetic
- Simultaneous multi sensory
- Direct and explicit
- Structured, sequential and cumulative (but flexible)
- Synthetic and analytic
- Cognitive
- Emotionally sound

Source: [www.ortonacademy.org](http://www.ortonacademy.org)

As can be seen for the above list, multisensory approaches are just one element of support and thus in the Orton and Gillingham model multisensory teaching is not the sole means of intervention delivery. The difficulties specifically related to using a multisensory approach alone for supporting dyslexia are highlighted in the following extracts from research into dyslexia:

*'However, although some small-scale studies provide evidence suggesting that multi-sensory teaching improves learning.....we do not have large-scale trials showing how effective such teaching methods are in practice. In contrast, starting from the premise that poor decoders have phonological difficulties, there is now considerable evidence pointing to the importance of explicit training in the alphabetic principle (understanding how letters in printed words map onto the phonemes in spoken words they represent) as a key component of a successful intervention for children who have decoding difficulties or dyslexia.'* Snowling and Hulme, 2011 page 5

*'One of the difficulties of evaluating the utility of the multi sensory approach is that it contains a number of elements commonly found in everyday classroom context, but only some of which may be important'* Elliott and Grigorenko, 2014 page 150.

*'Use a multi-sensory approach [to phonics] so that children learn variously from simultaneous visual, auditory and kinaesthetic activities which are designed to secure essential phonic knowledge and skills.....'Multi-sensory activities should be interesting and engaging but firmly focused on intensifying the learning associated with its phonic goal. They should avoid taking children down a circuitous route only tenuously linked to the goal. This means avoiding over-elaborate activities that are difficult to manage and take too long to complete, thus distracting the children from concentrating on the learning goal.'* (OFSTED, 2010 pages 42 and 43).