I'M CONFUSED, IS IT *DYSLEXIA* OR IS IT *LEARNING DISABILITY*?

Louise Brazeau-Ward

This booklet is written to help you to differentiate between dyslexia and learning disability. It is neither prescriptive nor exhaustive.

It is not only based on research on the neuro-physiological basis of dyslexia, but all examples are based on true-life experiences and told from the heart!

It provides an overview of what we know about dyslexia and learning disabilities, the difficulties experienced by students with dyslexia and appropriate school-based accommodations and modifications to assist them to achieve success. It also examines potential weaknesses in the current structure and hypothesizes about the benefits to a restructuring of our current screening, assessment and diagnostic techniques.

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My very special thanks to my ghostwriter who has harnessed my dyslexic thoughts, coped with my sudden bursts of inspiration, and helped me to present this information in a format that can be shared with others.

Louise Brazeau-Ward

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Dyslexia: Why the Confusion?

According to the National Institutes of Mental Health, dyslexia is the most common learning disability. It accounts for 80% to 90% of all learning disabilities. Obviously dyslexia has a great impact in the classroom and in the home. The Canadian Dyslexia Association has received frequent requests for assistance from educational professionals and parents alike. People come to us with heartbreaking stories of struggle and frustration.. The confusion I observed surrounding Dyslexia was alarming.

Common Myths about Dyslexia

- ✓ Dyslexia is rare. (23% of the population)
- ✓ Dyslexics will not succeed in life. (A great majority of dyslexics have invented or done something great for humanity).
- ✓ Dyslexia will prevent your child from succeeding. (Your child should succeed not despite dyslexia but because of it.)

Dyslexia: Why the Confusion?

- ✓ Dyslexics are learning disabled. (Dyslexics can also be learning disabled but usually they only become learning disabled because of ineffective teaching.)
- ✓ It is difficult to diagnose. (It is easy once we know what we are looking for)
- ✓ Reading difficulties disappears with age. (Not if it's dyslexia)
- ✓ Repeating a school grade can remove dyslexia. (To do more of the same that made you fail in the first place)
- ✓ Dyslexia is limited to those who reverse letters or numbers. (Only 10% of dyslexics reverses letters)
- ✓ Dyslexia is caused by parents who do not read to their children. (Some parents read often to their children, some are writers, own book shops, are translators….)
- ✓ Dyslexia cannot be diagnosed until a child is in third-grade. (It should be diagnosed in kindergarten)
- ✓ Only a psychologist can assess individuals with Dyslexia. (Only if he has received training in the assessment of people with dyslexia).

I had to ask myself, with all the research and success in the treatment of dyslexia, why was there still so much misinformation. I believe there are three important points to examine:

Firstly, more extensive training is needed for our educators to recognize a child at risk. More training in detecting Dyslexia for an early childhood educator would mean more students could be screened sooner. The earliest the detection, the sooner appropriate modifications can be made and implemented. Regardless of the outcome, timely modifications are important for the child's educational and emotional well-being. Here is an example of one dyslexic teenager's experiences.

Dyslexia: Why the Confusion?

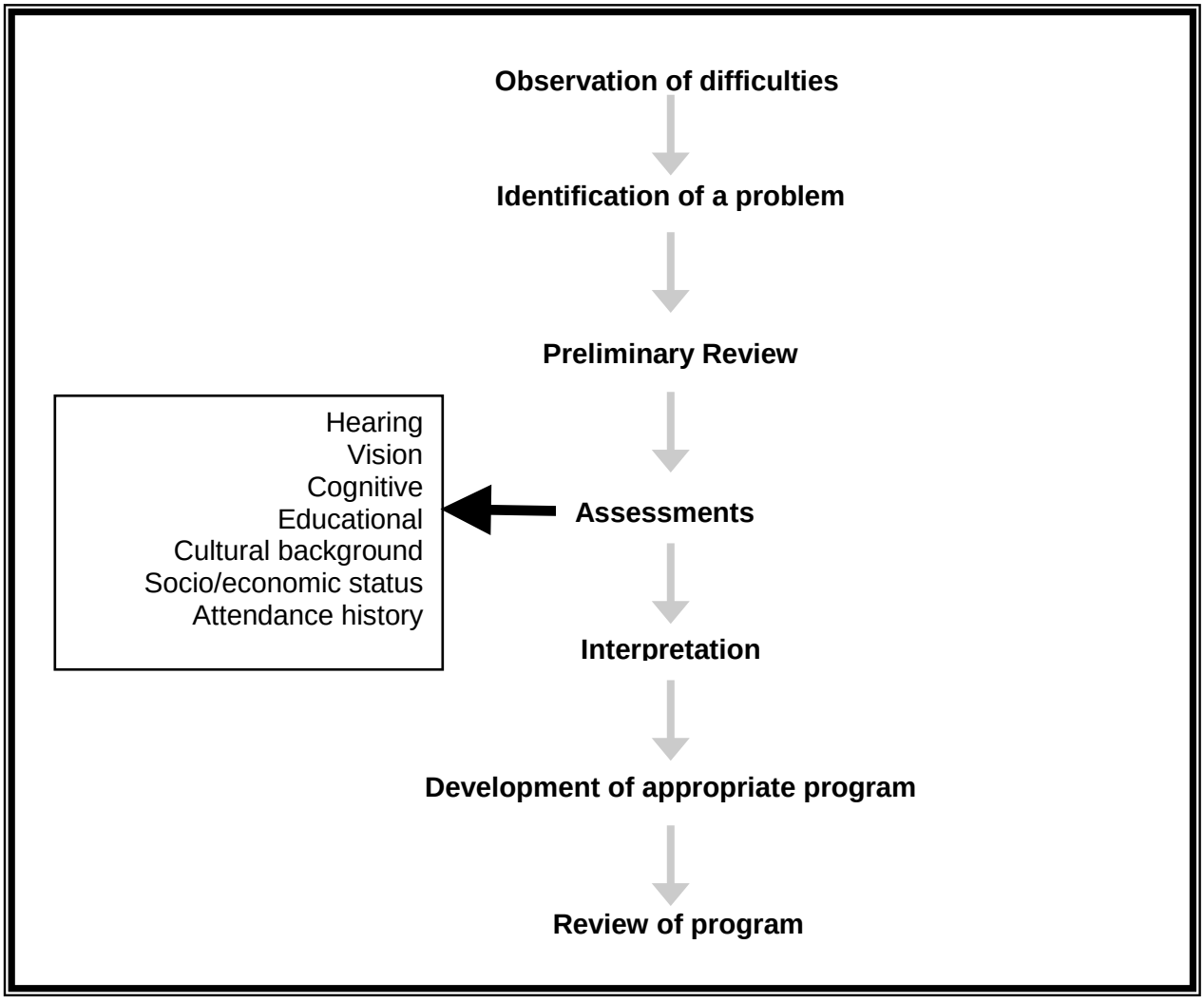
I met Catherine when she was 15 years old. She could not read. Her parents came to see me because they were confused. They had just had a meeting with psychiatrists and psychologists who believed that Catherine's reading problem reflected problems with her family. After all her father and grandfather did not like to read either. After seeing her, it was evident that her problems were due to dyslexia. I arranged a tutor for Catherine. She was so happy. She told her teacher that she was finally learning the alphabet. The teacher replied: "*You must be stupid if you do not know your alphabet."*

Catherine became depressed. She dropped out of school. The following September she received a call from her former special education teacher asking her to come to register at school. Catherine told him that she did not intend to go back to school. The teacher said that if she registered she would receive a bus pass and she could always leave if she wanted to. (He also needed enough students in his special class before the September registration deadline.) Catherine signed the document. She never went to school and in May she received a phone call from the same teacher telling her that he would drop by to have her sign her report card. She said: "*You must be mistaken. I did not go to school*." He replied that he knew, but that he needed to have a signed report card to be able to register her the following year. The teacher drove with a student to her house. The student gave Catherine the report card to sign. She called me. She was upset and shocked. She said: "*I never set foot into the school and this is the best report card that I ever had. I don't have a mark below 80*". Now whenever Catherine walks past the high school she feels ill. She says she will never have children; she is too afraid that they will go through what she went through.

Had her teachers and physicians been better informed about 'what to look for' perhaps her love for school would have grown, instead of having been extinguished.

Screening and Assessment

The second issue is changing the existing model we use for assessment, which can leave a child waiting years for a psychologist evaluation. The assessment process is shown below.



Screening and Assessment

It is important that someone who has experience with dyslexia does the assessments so that the results can be interpreted accurately. Dyslexia is one of a number of learning difficulties. Identifying the specific nature of the student's learning difficulty is important to determine the best support and accommodations. Schools will often group dyslexia within the broader definition of learning difficulties/learning disabilities and there are serious implications arising from this.

Dyslexia is more difficult to define/diagnose because the learning problems are often more subtle. Although the child is often ignored, his problems are nevertheless extremely debilitating, affecting all areas of educational performance. While the problem remains undiagnosed, the student is often denied appropriate assistance or the Learning Disabilities (LD) label is often used as a synonym for dyslexia. This confusion is a contributing cause in the improper identification and timely remediation of students with dyslexia. The damage done in these years is immeasurable. I feel the next story shows how scaring this situation is.

Alex is now almost 12 years old. Last year he told me that he was going to kill himself.
It all started when Alex got to 1st grade, at mid-year the teacher noted that he was not advancing at the same level as other kids, so she asked to meet with me to see what could be done for Alex. It was clear to her at the time that Alex was not functioning or learning like other kids his age. He would not (the comment was that he 'would not' – not he 'could not') read or concentrate or even function within the classroom. Plus he would not participate in any activities, his classmates where constantly teasing him by calling him stupid or other really hurtful names. Therefore at the end of the year, the teacher suggested that he be promoted to the 2nd grade even though he had a comprehension level of a beginner starting his first grade. She was convinced that it would be worse for him or for his self-esteem to stay back a year. But she also suggested we consult with a specialist at the hospital. As suggested it was summer so I made an appointment to meet with a specialist.

Screening and Assessment

It was in mid-August that Alex and I got to meet with the specialist. As we got there Alex was asked to sit in a middle of the room and draw whatever came to his mind, as we were going to chat the specialist and I. After five minutes of my explanation of Alex's behaviour and problems in school he diagnose him 'Learning Disabled/Attention Deficit Disorder (ADD)' and he said I was to put him on 'Ritalin'. -- I refused; I was convinced that he suffered from something else because he was not a hyper kid. I was scared because as I have been working in the criminal justice system for the past 13 years, I know that 98% of all incarcerated young men under the age of 25 year old were on "Ritalin" as kids to control their social behaviour and to numb them into submission. I have strong feelings against this drug (Yes, in some instances it has been proven that kids need 'Ritalin'). I believed that my son did not need it; he did not have symptoms of ADD. When I read the following, it scared me:

Excerpt from "Ritalin and Chemical Straight-Jacketing": "People call drugs like Ritalin a godsend for emotional and behavioural problems... But I think the way they're overused is absolutely horrifying. When I was asked by the National Institutes of Health to be a scientific discussant on the effects of these drugs at a conference they held, I reviewed the important literature, and I found that when animals are given them, they stop playing; they stop being curious; they stop socializing; they stop trying to escape. Ritalin makes good caged animals... We're making good caged kids. It's all very well to talk about it taking a whole village to raise a child, but in practice, we're acting as if we think it only takes a pill."

In September he started 2nd grade; no improvements were made it was worse. He was convinced that he was stupid, he believed he was: 'good for nothing', 'would end up in jail'. I was not able to bring it out of it, nothing I could say, no matter what I tried: positive reinforcement, getting angry, it kept back firing as time progressed. It had now evolved to having 'social problems – behaviour problems'; he was constantly interrupting in class, not following rules. This situation was also present at home; he was giving his brothers and I a hard time.

By June it was clear that he was not being promoted to the 3rd grade. One morning I got a call to meet with the teacher, principal, school psychologist, and the specialized speech therapist. I was told that there was a ray of hope for Alex. The school board decided to help us (Alex and I) by transferring him to another school in the city that could accommodate 'his kind' and that we were very lucky because it could only accommodate 15 students per year, so it was a real miracle that Alex got in. This wonderful school had a special class for 'Learning Disabled'. I was really grateful, and was looking forward to the following year.

On the first day of school I went to meet the teacher with him, she seemed so nice. I was sure it would finally be so wonderful for Alex to go to school every day. As time progressed for some reason (that I could not comprehend), my son hated that 'special class'. He cried every morning not to go. I tried to encourage him by explaining to him that he was different and he had special needs and this school would give him opportunities that he could not get elsewhere, I told him he should try to like it and that things would get better if he had the right attitude. - (I was so angry with him, we were given this precious opportunity that so few people had and he finally had an opportunity to succeed even though he was disabled (I thought that maybe that specialist was right, he needed to go on 'Ritalin'). I thought he was so ungrateful).

Well by the time he got to mid-year, his mood had deteriorated considerably. He was talking further about dying, about giving up. He even told me one night that even the stupid kids in his class knew how to read and write. He told me he was more stupid than the stupid ones. The 'special class' was not helping, Alex was behaving really badly with authority, and he was very impolite. He hated school; he was depressed and angry at the world. I decided to meet with his teacher because I was really worried about his attitude and I wanted to discuss his behaviour with her and see if he was behaving the same way in school. I made an appointment to meet with her one afternoon. I had gotten there earlier and by coincidence Alex was outside with his gym class in the schoolyard. I was surprised to see them outside since it was raining a bit. What I like about the 'special class' was the fact that their curriculum included a gym session every day. Since many of these 'special skids' were hyper

it was a good way to burn off some of that excess energy. So there I was in the schoolyard with at good 15 minutes remaining before I would go in to meet his teacher.

I thought this was a great opportunity to observe his interactions and behaviours during a class with classmates. Alex was sitting on the bench looking at some of the kids playing baseball (out of 15 kids there was no more than 7 kids playing baseball with the teacher) while others were scattered throughout the schoolyard playing tag or other games. Alex had not seen me so I kept walking towards him until I saw a group of kids playing beside the swing and slide. I sat on a bench and observed a little group playing; what I saw astounded me, there was a little boy, he must have been about 12 years old, he had a skipping rope tied around a little girl's neck and was pulling on it. They were playing 'walking the dog'. This little boy was talking and I became aware that he had no notion whatsoever that he could hurt or even kill this little girl. As for the little girl she was not even screaming, she just followed him quicker on her knees while barking and panting like a dog. While I was sitting I observed these kids and realized that most were mentally challenged and while others I could not say what their 'disabilities' were all I knew was that my son did not have the same problems, but where else could he go, since after all according to them, he was 'learning disabled'.

Well the year ended and my son was expelled or transferred out of the 'special class' and returned to his old school in a regular class; they told me they could not deal with his 'behavioural problems' and that further more they did not have to deal with it either since their school wasn't part of my district.

I went to my local Health Community Services to learn how to deal with my son, they suggested I take courses on "Parenting" and start seeing a family social worker, I was told that Alex's behavioural problems were because I lacked in 'Parental Skills', and the fact that I was divorced with four kids where the reasons he was behaving the way he was, because I was unable to give him quality time.

They were professionals so I believed what they told me 'I was the problem' and I understood that if I worked real hard with the social workers, took courses, Alex's would no longer have

any problems, because I would learn how to deal with his behavioural problems, and the school problems would be solved automatically. Consequently our family had weekly visits from a social worker and I went to 'Parental Course' once a week for a period of twelve weeks. September came around and I went to meet with the professionals (the same people I had met with the previous year). The results were that Alex was still at a 1st grade level, (For the first time the Special Education teacher revealed that Alex might be dyslexic, but was unable to diagnose him properly because she did not have the proper training to do so).

It was agreed that Alex was their problem now, since by law he had to go to this school because it was part of our district. Then came the dilemma of placing him at the right education level within a regular class. They had to factor in his age. He was now 11 years old. Anyhow, they took everything in consideration and placed him in 4th grade, (even though he had failed his 2nd grade three times and had never done a 3rd grade he was being advanced to the 4th grade – it would be better for his self-esteem and ego they said).

This is when he decided to take his life. As a result, the school and local authorities became involved and threatened to remove him from our home. I called his social worker, I was going crazy, and no matter how I tried he was not getting any better. I took the courses, I kept seeing and working with Children Aid and a Social Worker from the Health Community Services, I was taking their advice and I was working hard at doing everything they told me to do, even though my kids were begging me to stop seeing them, crying saying they did not want them in our lives anymore, no good was coming from their interventions. But I believed it was the only solution.

The social worker wanted me to hospitalize Alex in the psychiatric ward; she told me that if I did not do it - she would. She met with him and diagnosed him with severe depression; she was going to make arrangement for him to go under observation for a period of three weeks. I restlessly agreed to it, it was to save my son's life. Alex was hysterical promising to run away if I went ahead and put him in that hospital.

Screening and Assessment

In the middle of this crisis, I happened to put my hands on a brochure from Heritage Academy; a student of my mother's had given it to her after she had described Alex's problems. She had recognized similarities with her own behaviour as a child, although she was diagnosed 'Dyslexic' as an adult she remembered all too well what she had gone trough as a child. She explained to my mother that her son was also dyslexic and attending Heritage Academy. So out of the blue I called, and spoke to the Director, I do not remember what I told her, I just blurred everything out at the same time, not really knowing why I was calling at this point when my son was to be put in a 'mental institution' by the end of that week. She very calmly interrupted me, and asked to see us that evening. She did not know if he was or was not 'dyslexic' until proper assessments were made. She asked him why he was so depressed at his school. This is what he told her:

- My teacher called me "Pillsbury" because I had put on a lot of weight. (Alex had put on weight due to depression)
- The social worker constantly told me that I was getting too fat.
- The specialists took me in a room and told me that I had to tell the truth about all the bad things that my parents were doing to me. That is the only way that I would get better.
- I often stayed in at recess because I did not finish my work. Of course, I could not because I can't read and write good enough.
- When the teacher told me that I will not amount to anything because I did not work, I told her that I would leave school. Then the teacher told me that if I did the Child Protection Bureau would remove my 3 brothers and me and put us in a foster home. The decision was mine.

Then the Director took a good look at Alex and asked him what he wanted to be when he grew up. He said that he wanted to be a pediatrician before… but knows that this is impossible because he cannot read. She told him that she could teach him how to read and write and that he could attend the school for dyslexics but on one condition only. He must believe that he can

become the pediatrician that he wants one day. As long as he holds on to this belief, then she can help him.

Alex was tested, it was very clear that he was a smart dyslexic, he was not learning disabled. Within the first couple of days at Heritage: he was smiling, he was happy, doing great in school.

Needless to say the social worker did not want to believe this sudden change in Alex. (She wanted him hospitalised). She met with him, at home and at the new school and saw for herself the transformation in Alex.

It as been close to a year now since being accepted at Heritage, my son is now a proud young man, he can read in French and English and as started Spanish.

Since dyslexia is hereditary I found out that my other son Sebastian is also dyslexic. Sebastian story is very similar to Alex's but without the behavioural problems at least until a few months ago. For financial reason I had to keep him in a regular class. I met with the school's professional educators on different occasion and they assured me that he was getting sufficient help with the resource people at his school. They said they would also ease his curriculum so he could follow his classmates, (they no longer keep children back a year). It became evident to me that he wasn't getting the help he needed, (he was starting to walk in the same path as his older brother: '*I am stupid, I can't write'*, '*I hate school*", and the list goes on).

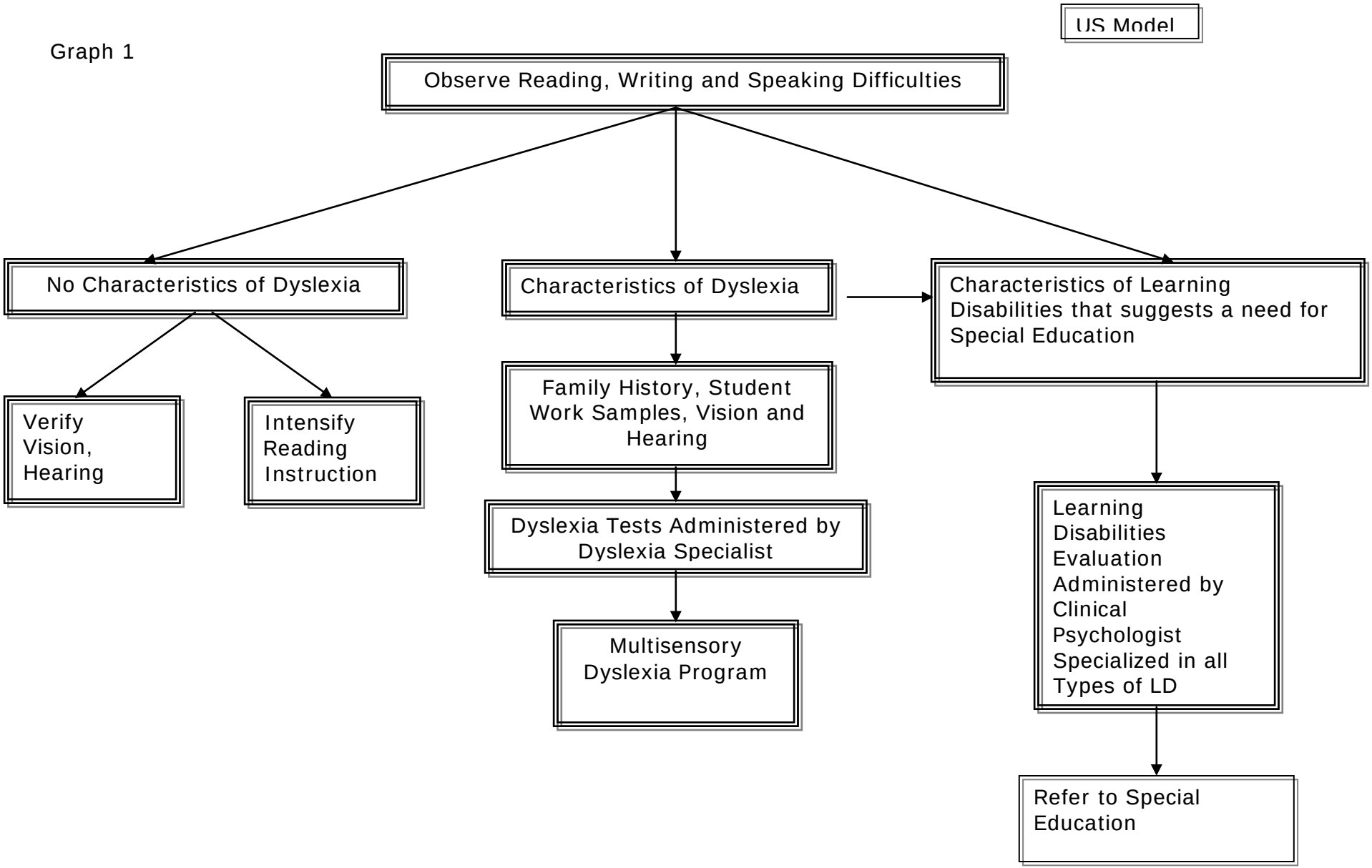
It was very hard for me to see that one of my son was getting an opportunity to succeed in school (considering he started out with all the odds against him) and that I having to make a choice between who needed Heritage the most. I finally asked for financial help from my family and now thankfully both are attending the same school and they are making amazing results.

I thank God every day, for sending that Director in our lives. I am also very grateful and amazed by her strengths and beliefs in her battles to have 'Dyslexia' finally recognized for what it is.

As I was writing this story, I found myself reliving these events all over again; it all seems so far away and almost impossible. Now I beg you parents 'For the sake of your child, please find out what kind of learning disability he has. If your child is just dyslexic don't let anyone label him Learning Disabled. Make sure that he gets proper schooling. Maybe one day he will be a *famous pediatrician*."

Author: Alex'& Sebastian's mother

Screening and Assessment



Screening and Assessment

A new model of screening and assessment for LD, such as the US model seen in graph #1, would divert students like Alex and Sebastian to the proper modifications or treatments sooner. A kindergarten teacher would be trained to recognize the symptoms of dyslexia and point the parents and faculty towards immediately available modifications of teaching strategies. Recent research into teaching and learning strategies, focus on the importance of catering for mixed ability groups. Never has this been more important than for students with dyslexia. We know that traditional methodologies *do not work* for this group of students! All classrooms include children with a broad range of skills, abilities and preferred learning styles. The challenge for teachers today is to make the curriculum suit the students (rather than making the students fit the curriculum).

Screening and Assessment

In almost every classroom there are children who have to struggle to learn and who might therefore be said to be experiencing learning difficulties. There are a number of possible explanations as to why these students will fail to perform satisfactorily on an achievement test. Since the 1960s research has been undertaken to identify specific types of learning disabilities such as dyslexia, nonverbal learning disability, and severe language disorders, among others. The research has also fostered the development of a range of prescriptive teaching strategies and a more positive outlook on disabilities such as dyslexia. It is now known that children with dyslexia can learn given appropriate educational programs and instructional techniques.

To do this, teachers need to know about each student's strengths, weaknesses and preferred learning style. For those students who experience difficulties, accurate assessment and diagnosis are essential. They are crucial if the child's needs are to be met within the classroom. The assessment process will usually involve:

- ***Review of a student's written/class work***
- ***Screening tests: Vision, hearing***
- ***Family History***
- ***Cognitive assessment:*** Screening and/or Intelligence Tests

  Screening Test: The *Raven Progressive Matrices* is a nonverbal test that assesses mental ability by requiring the examinee to solve problems presented in abstract figures and designs. The test is reported to correlate well with comprehensive intelligence tests and shows a high correlation with Spearman's "g" factor*. Spearman's "g" factor - processes or procedures a child uses to solve a problem that is new to him/her. It should be noted that the Raven's is generally viewed as a measure of intelligence based solely on figural-reasoning tasks and thus may discriminate against students who have a deficit in this area. [1]

  Intelligence Tests: *WISC 111 or The WAIS 111*
- ***Listening Comprehension Test***
- ***Informal Writing Test*** - This task provides information about a person's writing behaviour, fluency, word usage and spelling.

[1] http://www.scusd.edu/gate_ext_learning/gate_screening.htm

Screening and Assessment

- ***Motor free test of visual perception -*** The MFVPT is a visual perceptual test which avoids motor involvement.

- ***Jordan Left-Right Reversal Test -*** This test measures the ability to distinguish between the orientation of letters, numbers and words.

- ***Bangor Dyslexia Test -*** This test reveals areas of difficulties usually found in persons with dyslexia. Such difficulties include: repeating polysyllabic words, months forward, months reversed, reversing digits, b-d confusion and left-right (body parts).

- ***Swassing-Barbe Modality Test -*** This is an individually administered test that identifies the modality through which an individual learns best. A modality is any of the sensory channels through which an individual receives and retains information and includes visual, auditory, tactile and kinesthetic learning

- ***Light Sensitivity Screening -*** This test will reveal if the student has a sensitivity to light, commonly known as scotopic sensitivity syndrome, which makes reading a slow process.

- ***One of the following Dyslexia Tests:***

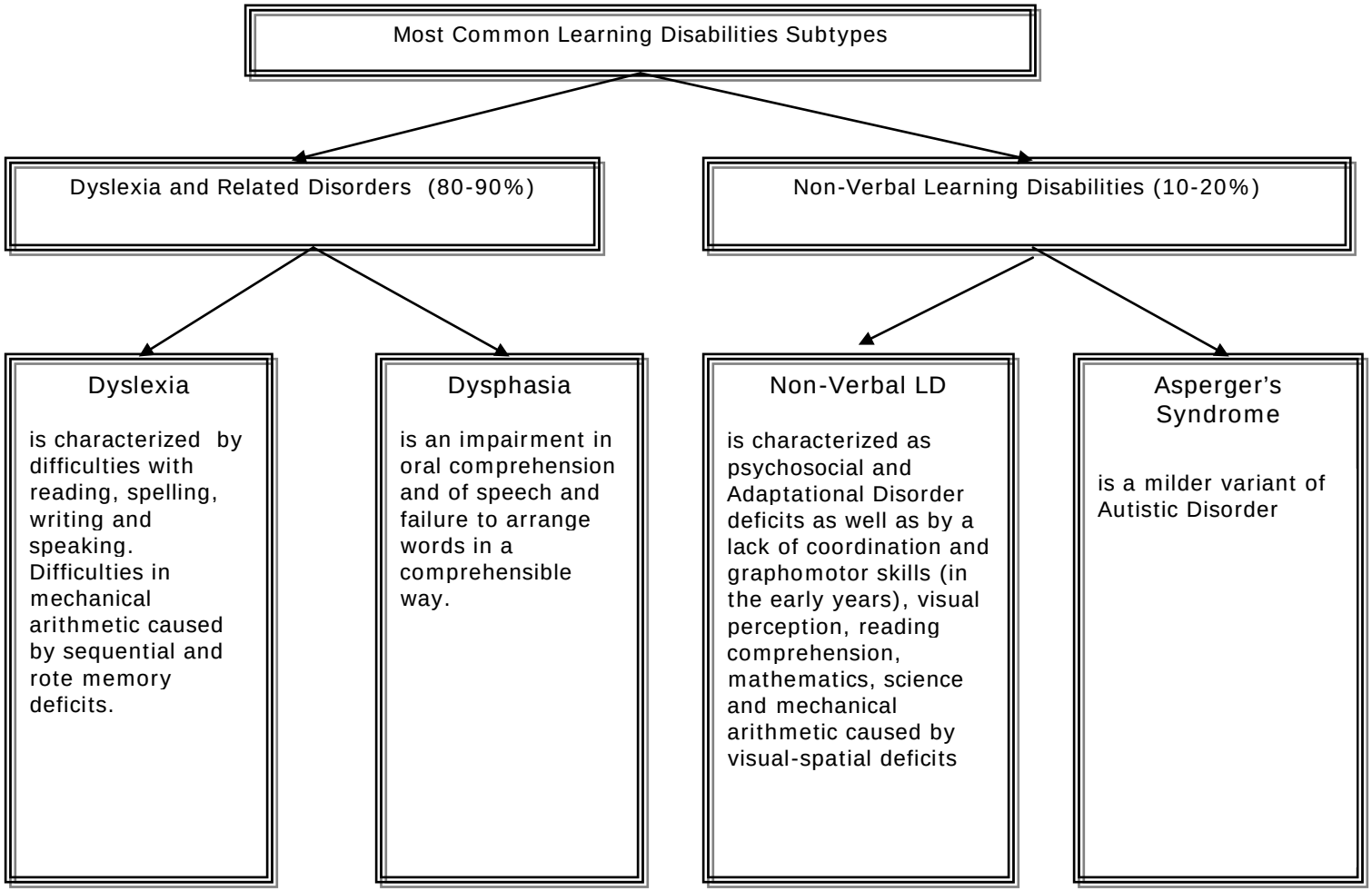
  - ***PLCT - Pre-Dyslexia Letter Coding Test (Kindergarten)*** *-This test will identify students at risk for dyslexia.*

  - ***DSF- Dyslexia Screener for First-graders (Grade 1)*** - This test will identify Grade 1 students who demonstrate characteristics of dyslexia.

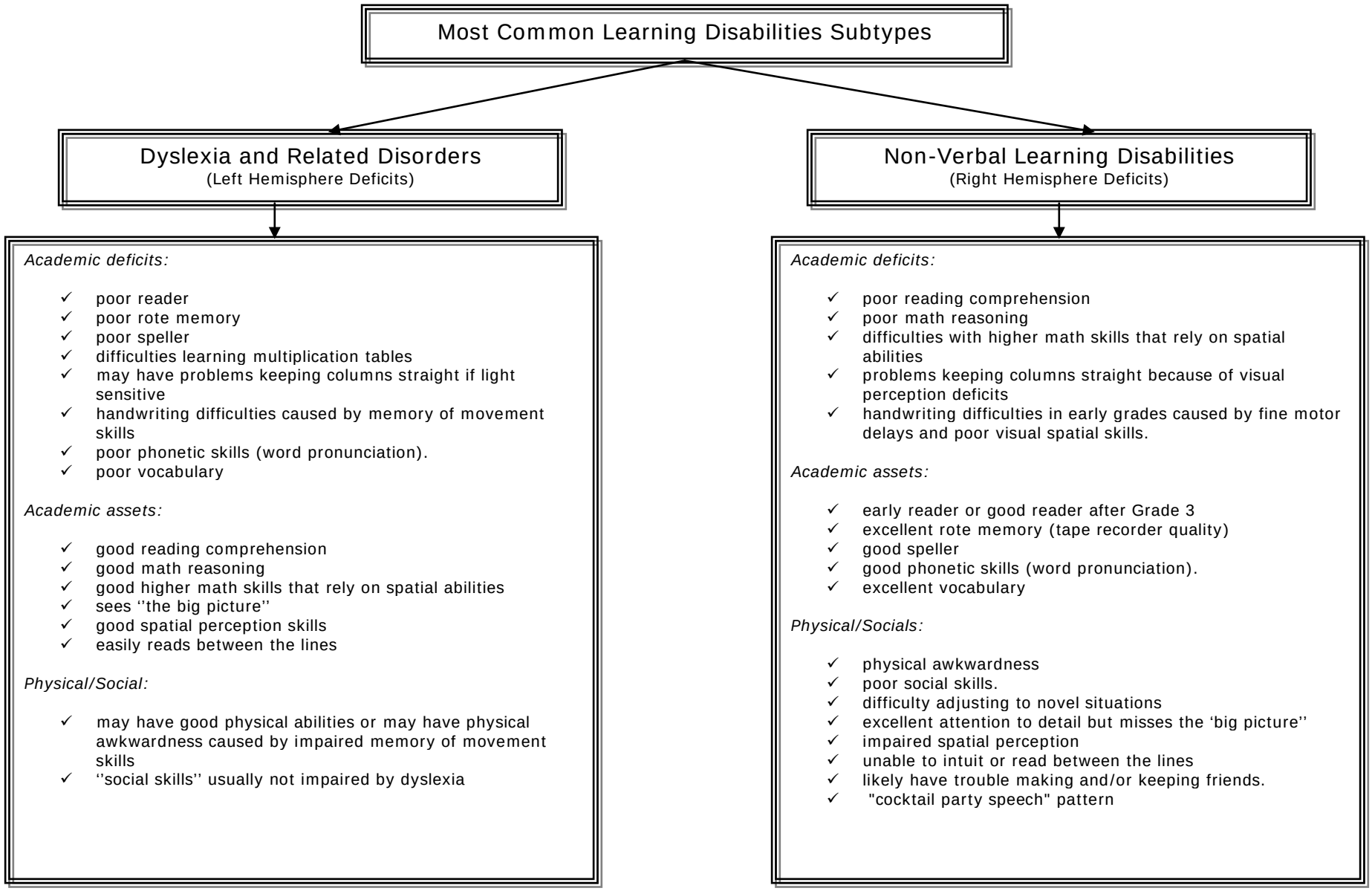
  - ***DDT - Dyslexia Determination Test (Grades 2-12)**** *- Grade 2 and over - This test that will differentiate students who demonstrate characteristics of dyslexia from students who have difficulties in reading, writing and spelling due to other causes.*

  - ***ADT -Adult Dyslexia Test (18 years and older)*** *-This test assesses an adult's decoding and encoding skills. It identifies specific patterns of errors associated with various forms of dyslexia, differentiating them from other learning disorders.*

Screening and Assessment



Screening and Assessment



Screening and Assessment

The Dyslexia Determination Test (DDT) will determine the three fundamental types of dyslexia and its seven permutation patterns. It is used to investigate specific aspects of language problems relating to reading, writing and spelling. The test is in three parts; the first one involves checking for written reversals of numbers and letters. The second part tests the mode of decoding words: eidetic or phonetic. The third and last part consists of assessing whether encoding is eidetic or phonetic.

Examples of the **three** fundamental types of dyslexia

Dysnemkinesia (motor) – A deficit in remembering how to do the movements needed for writing.

For example: The student will make reversals.
The student will write **b** instead of **d**.

Dysphonesia (auditory) - A deficit in the ability to sound off, to syllabicate, to pronounce and to distinguish sounds of unfamiliar words.

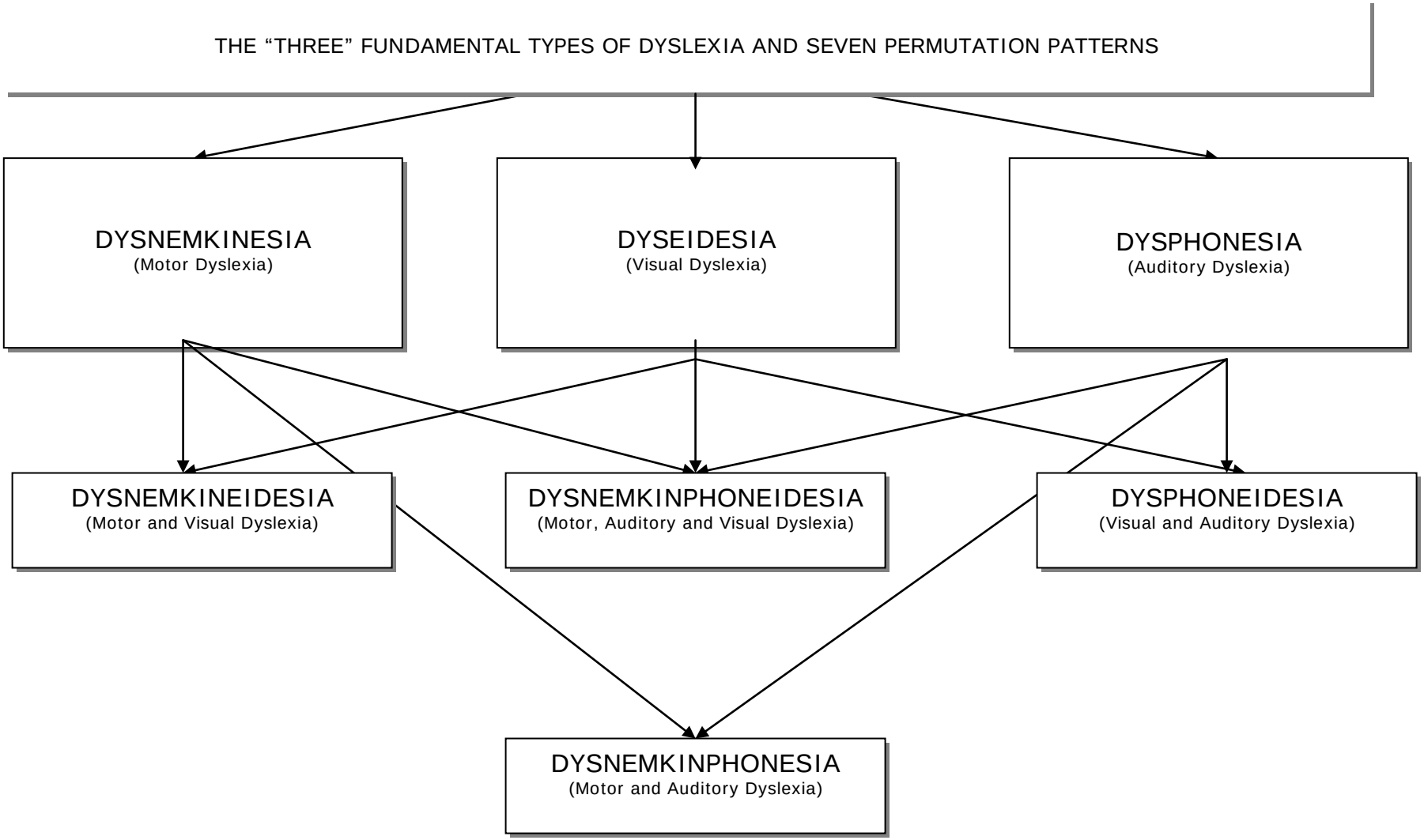
For example: The student reads **house** instead of **home**.
The student writes **aminal** instead of **animal.**

Dyseidesia (visual) - A deficit in the ability to recognize whole words by sight and match them to whole-word sounds.

For example: The student reads **ball** instead of **bell.**
The student writes **enuf** instead of **enough.**

IMPORTANT: A student with a *Non-Verbal Learning Disability* and/or a *visual acuity* problem **will not** demonstrate characteristics of dyslexia on the DDT

The above dyslexia tests are available from the Canadian Dyslexia Centre.


THE “THREE” FUNDAMENTAL TYPES OF DYSLEXIA AND SEVEN PERMUTATION PATTERNS
DYSNEMKINESIA
(Motor Dyslexia)
DYSEIDESIA
(Visual Dyslexia)
DYSPHONESIA
(Auditory Dyslexia)
DYSNEMKINEIDESIA
(Motor and Visual Dyslexia)
DYSNEMKINPHONEIDESIA
(Motor, Auditory and Visual Dyslexia)
DYSPHONEIDESIA
(Visual and Auditory Dyslexia)
DYSNEMKINPHONESIA
(Motor and Auditory Dyslexia)

If the child's problems persist, then more observation is needed. Other difficulties may be present and compound the problem. Of course, some students may have other difficulties, which combined with their dyslexia, do not allow them to succeed in the regular class. 'Special education', a more specialized curriculum tailored to their specific disorder, may be the answer.

Definition of Dyslexia (Adopted by the Canadian Dyslexia Association)

"Dyslexia results from a different brain organization. This may cause problems with reading, writing, spelling and speaking, despite average or superior intelligence, traditional reading instruction and socio-cultural opportunity. The biological condition of dyslexia is hereditary."[2]

Definition of Learning Disabilities

Many definitions exist to define Learning Disabilities (LD). I prefer the definition of Dr. Byron P. Rourke, a world re-known authority on Learning Disabilities. I find that his definition is clear and precise.

Dr. Rourke, defines Learning Disabilities in two major subtypes:

1. Basic Phonological Processing Disabilities (BPPD) *and*
2. Nonverbal Learning Disabilities (NLD)

Characteristics of the **BPPD** subtype which includes *Dyslexia and Related Disorders*

- poor auditory memory
- poor single-word reading
- poor spelling
- poor mechanical arithmetic
- will not necessarily lead to shortfalls in psychosocial functioning

[2] Dyslexia Concerns Us! Brazeau-Ward, Louise, (1994).

Characteristics of the **NLD** subtype which includes Asperger)

- good auditory memory
- good single-word reading
- good spelling skills
- good mechanical arithmetic skills compared to math reasoning skills
- normal or mild shortfalls psychosocial functioning in children below the age of four years
- psychopathology characterized by withdrawal, anxiety, depression, atypical behaviours, and social skill shortfalls in older children and early adolescence

For a more extensive description of NLD and BPPD, refer to Rourke (1989)[3]

As you can see the two major subtypes of LD are quite different, actually they are quite opposite to each other. What is an asset in one category is a deficit in the other, and what is a deficit in one is an asset in the other. The term 'Learning Disabilities' can be used to establish policies and to advocate for the millions of people with LD. But if we need to really help someone with a learning disability, we must know 'which learning disability it is'. The academic accommodations are quite different for someone who has a math disability because of dyslexia and for someone who has a math disability because of a non-verbal learning disability.

A psychologist should not be allowed to write 'learning disabled' in a report unless he s**pecifies** which **type** of learning disability it is. After all the dermatologist will not write 'skin disorder' on a medical report, but he will specify which type of skin condition it is. It could be anything from a plain rash to a more serious skin condition.

[3] C:\WINDOWS\Desktop\Byron Rourke.htm

Screening and Assessment

> "Being designated LD has become relatively effortless and risk-free, as attested to by the present number of students with LD. LD has captured a large number of students, including a significant portion who are low achievers, not underachievers as originally intended."…. "LD is viewed by some to be a 'dumping ground' and the present numbers, without rhyme or reason, attest to this view. The large LD population has become increasingly ill defined, resulting in a vagueness surrounding the LD concept. In a majority of instances, it is possible to question the validity of LD diagnoses because of an inability to answer the question " What is LD? " [4]

Students are not necessarily learning disabled because they have the condition of dyslexia. Unfortunately, there is no 'Dyslexia Law' in our schools in Canada. All students are all grouped under the LD label.

Some states such as Louisiana, Texas has passed a 'Dyslexia Law'. Students at risk for dyslexia received multisensory teaching in the regular classroom setting. On the other hand, learning disabled students with the condition of dyslexia have special education services.[5]

In January 2003, a recent task force suggested a three-tiered model of intervention.

First level: the regular education teacher tries extra interventions

Second level: the general education teacher, the special education teacher, and other related services personnel will intervene

Third level: the student is eligible for special education services. The qualified examiner prepares an IEP.[6]

[4] http://www.ldonline.org/ld_indepth/legal_legislative/politics.html
[5] Source: Texas Education Law (Dyslexia Handbook)
[6] A New Era: Revitalizing Special Education for Children and Their Families

Screening and Assessment

After listening to more than a hundred experts, a US Commission released a report that stated that:

- Too many students in special education fail to graduate from high school and successfully complete transition plans.

- Current assessment methods of specific learning disability detection be amended to not require achievement tests and discrepancies. This move would eliminate IQ tests from the identification process except for individuals with possible mental retardation.

- Assessment processes based on response to intervention and progress monitoring were suggested by the Commission.[7]

When a child has reading and spelling difficulties, some institutions require an evaluation by a 'clinical psychologist'. The student must wait for an evaluation sometimes for years. If a verdict of learning disabled arrives, the prescription is all too often a 'Special Class' for learning disabled.

According to a recent survey in Ontario: "One in four" kindergarten pupils lacks the skills to do well in school.

To identify students at risk for reading failure and ensure timely remediation, a literacy test is compulsory for all students in grades 3 and 6. Some parents, to spare their children the stress and embarrassment, will keep their child at home during testing. They do not realize this hinders the process of identification and timely remediation. Also, there is no specific test for dyslexia in this process, so a child may simply end up learning in the same manner at a slower rate. Some students may receive a method more suited to another learning disability. To a dyslexic child these modifications will be futile.

In the Ottawa Citizen on February 21 2003 the headlines read: "*2nd chance for literacy failures, 60,000 stands to lose out on diplomas, so Ontario will offer remedial course*."

[7]

Why were those kids not helped in Grade 3? In twenty minutes any teacher experience in screening for dyslexia could have identify those students at risk for reading failure.

Maybe, just maybe, if the word 'dyslexia' was allowed in the school, maybe if school psychologists were trained to identify students with dyslexia, maybe if our Universities gave a course on dyslexia and related disorders, then just maybe eight years from now, the headlines might read: "*The Dyslexia Law passed by the Ministry of Education 8 years ago paid off. The literacy failures at the Grade 10 compulsory literacy test has dropped by 80%. The success is attributed to the early identification and the proper remedial intervention of students with dyslexia*.''

Finally, nobody is being served when students are given improper modifications. The expression 'learning disabled' was 'coined' in 1962 to allow children to benefit from special education in the USA. Parents tolerated this new label better than slow learner or socially inadequate. Unfortunately the label soon became a catchall term. This is wasteful, not to mention possibly detrimental to the child. Some kids who are put into Special Ed are not in need of a separate slower paced curriculum, rather, they need to be delivered the information in a different manner. With new teaching approaches and the proper tutoring, a child with dyslexia can flourish in any setting. We need to further specialize 'Special education'. Here is an example of how frustrated and angry a situation like that can make a boy.

> "If you care at all for your children you will read this and take it to heart. I want to tell of my own nightmare, and how my schoolteachers and parents destroyed my interest in school.
>
> First let me start by letting you know that I was not a great student. I was an average student who mostly made C's and B's with an occasional A and an occasional D. But the D's were rare. And I loved school. I worked hard and did the best I could. I can honestly say, that going into fifth grade there was no one on this

planet I trusted more than my parents and my schoolteachers. Despite average grades, I felt I was getting a lot out of school and found it fascinating My standardized scores on tests like the CAT and CTBS were always in the average range between the 40-60% range. I was about as average as I could be, but I was happy and I was in love with school.

Then, for some reason that puzzles me to this day, a nosy do-gooder, perfectionist teacher decided to stick her nose where it didn't belong; She coerced my parents into agreeing to a special education evaluation. NOW WHY ON EARTH WOULD SHE DO THAT TO ME?

My parents signed the evaluation - no questions asked. So one day I got called out of my classroom. I was told that I was going to be given a test. Mind you, I was a ten-year-old boy. No one else was required to take the test. I was lead down the hall all by myself out of the door and down a breezeway to a stand-alone shack, my nerves building all of the way. I was terrified. "Why were they doing this to me?"

My nerves got the best of me. I did well on most of the tests, but my nerves overtook me and I did poorly enough on the other parts of the test that I was placed in "special Ed". I was in classrooms with kids who were clearly intellectually challenged. I was humiliated, degraded and worst of all betrayed. I now hated my teachers and barely cared for my parents. I started to hate school, where as before then, I had loved school.

I was also in the worst of catch 22 situations, as there was no way out. What if I make all A's? Well it proves you need to be in 'Special Ed'! What if I make all F's? Well it proves that you need more specialized programs. And sure enough I made A's in those pathetic little 'Special Ed' classes. But what idiot would not make an A in them. The coursework was pathetically easy. Most of all, what was

> really bad, despite reassurances to the contrary, I was well aware of the fact the course work was not the same as what was in regular classes. I knew for a fact that I was not receiving an equal education. I knew it was unjust. Eventually it took its toll. I lost all interest in school and never made it past the eighth grade.[8]
>
> **Author unknown**

The stigma placed on this child was obviously damaging to his self-esteem and ruined his love for school. I believe that the model in Graph #1 would help to eliminate situations like this from reoccurring. It also frees up badly needed resources for the children who need that kind of specialized setting.

[8] 8 Dr. Jan Strydom, Susan du Plessis(2000) *The Right to* Read,

Waste not, Want not

We can't leave out the financial implications of restructuring, for parents, as well as schools and government agencies.

> "Special education has become a cash cow for school district. I'm sure the original intent of special education was good, but it has not produced a quality product. Current studies are telling us that the product is more harmful than good, particularly for students with normal intelligence who have graduated form special education classes. Many are deficient in basic skills and unable to produce in the workplace."[9]

While re-training teachers and professionals about dyslexia would be a new cost, the implications of savings for parents would be huge. I know people who have mortgaged their homes and gotten 3rd jobs, gone without vacations and Christmas gifts to send their kids to a specialized educational facility. What choice did they have? If their children had been properly assessed at an earlier age, perhaps they could have stayed in a public school and achieved success without the family sacrificing so much.

Money saved will then be available for the badly starved 'Specialized Education', teaching children who have needs beyond simple modifications.

A child that learns to love school and has success in academics will have a far greater chance to succeed in the workplace. Therefore, they are not forced to rely on our social safety nets in adulthood.

[9] Corcoran, John (1994), the teacher who couldn't read

What to Look For

I have witnessed many transformations in my position at Heritage Academy. Students that arrive with labels like 'lazy', 'unmotivated' and 'slow learners' made it and graduated with above average grades. They have achieved success at the Provincial Literacy Test and Sat exams. Most have gone on to University or College. Some are in Computer Engineering while some are working in the Arts. These successes are not due to a student overcoming a learning disability, but a student overcoming a teaching disability.

In his book *'' The teacher who couldn't read,* the true story of a high school instructor who triumphed over his illiteracy*,* John Corcoran says: *"I think the term learning disabled should be discarded. I see it as a teaching disability, and I prefer the term learning differences."*[10]

My son has just graduated with a BA (Hon) in History. It is because of him that I started the school in 1992 when a psychologist told me that he would never read or write. At best he could try to read baseball cards. I know, first hand the pain and frustration dealing with Dyslexia. My son did not have a failing, but he was told that by an outdated education system. It was this education system that failed him.

The following information maps out the most common characteristics of dyslexia and the modifications recommended for students with Dyslexia:

[10] Corcoran, John (1994) the teacher who couldn't read

What to Look For

People with dyslexia do not all have the same symptoms but the following are the most common.

Reading difficulties

- Extremely slow rate of reading
- Blurring and distortion of words

> Concluding paragraph. Essential for structuring and writing an essay is, of course, deciding what to say, how to go about assessing a particular argument for the purpose of constructing an interpretation of it.
>
> Th is co urse wil lst riv etoeq pst ud ent swi th bas ic crit ical t hin kingan d es sa ywri ting sk il ls.

- misreading of words which are visually similar

  was-saw, speak-break

- misreading multisyllabic words

  spaghetti, inheritance, aluminum

- omitting connecting words

  at, is, where, who, over, under etc.

- understanding complex sentences, (especially in testing situation)

  I will meet you for lunch unless you call to cancel.

  It would be easier to say: I will meet you for lunch. Call if you need to cancel.

- understanding negative sentences

  Which one was not there?

  What aspect cannot be understood?

- understanding long sentences

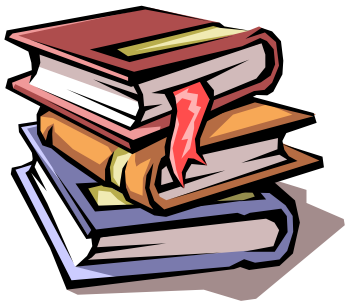
  Students will be introduced to a common essay-writing template that includes the introductory paragraph with thesis statement, three supporting paragraphs with topic sentences, and a concluding paragraph. Essential for structuring and writing an essay is, of course, deciding what to say, how to go about assessing a particular argument for the purpose of constructing an interpretation of it.

What to Look For

- reading small print below 12 to 13 point font
- reading poor quality photocopies
- reading on white paper
- confusion with math symbols
- reading a teacher's writing if not written very clearly.

  ½ may look like y2

  "At" may look like A+



Spelling difficulties

- misspelling visually similar words that are not picked up by a spellchecker

  for-from, top-pot

- writes the same words differently in the same passage

  enouff, enuf, enuff, ennugh

- numerous erasures and/or cross-outs which make written work very messy
- mixes up and/or omits letters or words
- may take up to 2000 times more to remember how to spell a word, compared to the maximum of 14 times needed by a non-dyslexic. Many famous writers never mastered spelling.

"It's a poor mind that can only think of one way to spell a word."[11] ***Andrew Jackson***

"William Butler Yeats couldn't spell worth a pin and probably couldn't read aloud either.' The following sentence is composed of a sample of the astonishing misspellings that pepper the letters of W.B. Yeats. They astonish because, as a poet, Yeats was fastidious, correcting and revising his work with consummate caution.

'The subtile and gorgeous originality of these vigorous Celtic letters shows such scholarship as to leave the reader fealing decidedly exhausted." **Thomas West**

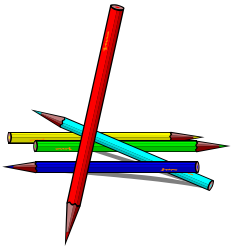
[11] www.cyber-nation.com/victory/quotations/quotes_menu.html

What to Look For

Note-taking difficulties

- inability to read own writing
- inability to take notes while listening
- difficulty in writing legible notes
- inability to write fast enough to copy from the board

Writing difficulties

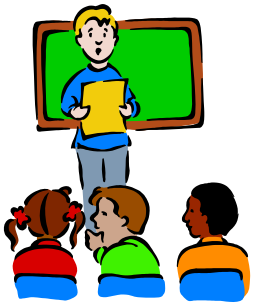


- inability to express ideas clearly in writing
- inability to write commensurate with their age/grade level
- difficulty with sentence structure
- difficulty with punctuation or omitting punctuation altogether
- mixing up sounds in multisyllabic words
- reversing letters and/or numbers

"Only the hand that erases can write the true thing."[12] ***Meister Eckhart***

Speaking

While most children with dyslexia are articulate, some may have speech difficulties.



- difficulty in expressing ideas clearly orally
- speech that is fast and sometimes cluttered
- difficulty speaking clearly during oral examinations
- difficulty with 'demand speech'. Which mean speaking clearly c within a time limit or during oral examinations. However, there i spontaneous speech.
- omitting and/or substituting words
- repeating sentences
- difficulties with the pronunciation of multisyllabic words (aluminum, visualisation etc.)
- difficulty in finding the right word when speaking

[12] www.cyber-nation.com/victory/quotations/quotes_menu.html

What to Look For

Moses, however, said to the Lord, "If you please, Lord, I have never been eloquent, neither in the past, nor recently, nor now that you have spoken to your servant; but I am slow of speech and tongue." ***Exodus 10***

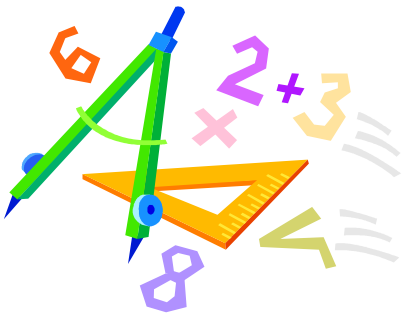
In his mind's eye he could see the white sheets of paper on which he had written his sermon. Then suddenly the thing happened--the terrible thing he had feared. The words disappeared! In panic he searched his mind only to find it blank - the rest of the sermon – the words he had tried so hard to memorize - was gone, gone![13] ***The Curé of Ars***

Listening difficulties

- when the teacher has his/her back to students
- in a noisy room
- when the teacher uses unfamiliar words without visual support
- misunderstanding instructions
- misunderstanding long complex sentences
- screening out unimportant information

Math difficulties

- memorizing multiplication tables
- reversing numbers
- losing place in long division
- difficulty with word problems because of poor reading



[13] Lomask, Milton: The Curé of Ars, P.102

What to Look For

Organization skills

- forgetting assignments and/or appointments
- forgetting books at home or at school
- losing papers
- miscalculating the time needed for tasks
- getting lost in an unfamiliar building (sometimes in a familiar building as well)
- getting mixed up between left-right, west-east, up-down
- difficulty telling the time (if using a clock with hands)
- messy desk

"If a cluttered desk is a sign of a cluttered mind, just what does an empty desk mean?"
[14]**Source Unknown**

Common physical problems in children with dyslexia

- migraine headache caused by fluorescent lighting or weather
- allergies affecting listening and ability to concentrate
- inability to concentrate under particular weather conditions
- extreme stress during testing situations
- unexplained days of total fatigue
- a feeling of being overwhelmed when a large amount of writing is required
- circulation problems affecting the ability to sit still for a long period of time
- motion sickness affecting the ability to use elevators, escalators, driving etc.
- motion sickness caused by vertical/horizontal blinds in a room
- visual disturbance caused by strong contrast (a teacher in a checkered/striped shirt)
- sensitivity to perfumes, strong deodorant or chemicals
- physical pain in wrist and hands in producing written work
- auditory problems in the presence of background noise (someone tapping a pencil on the desk, or a noise from an adjacent room etc.)
- sensitivity to some sounds, such as: speaker phone, hand clapping in a theater etc)

[14] www.cyber-nation.com/victory/quotations/quotes_menu.html

What to Look For

Performance of dyslexic students during tests and examinations

Students with dyslexia are greatly disadvantaged in the examination process and may show the following symptoms:

- discrepancy between knowledge of subject matter and performance on tests
- slow reading rate increased by blurring of words (words may jump all over the page or totally disappear)
- stress affecting memory for simple known words (e.g.: forgetting what the word 'division' or 'multiply' means)
- inability to produce written work on the spot
- writing in the wrong column of the multiple choice type questions (the columns can switch back and forth and then the student writes the wrong answer)
- inability to write in a room with fluorescent lighting (causes words on the page to move)
- slow reading makes understanding 'trick' questions next to impossible.
- does not "see" non-image words such as: at, after, last, etc.
- substituting a word not picked up by the spellchecker. The teacher should **not** penalize student for dyslexic type errors.

The following spelling errors, not picked up by the spellchecker, appeared on university students examinations papers. The students wrote:

✓	*for*	instead of	*from*
✓	*sternum*	instead of	*scrotum*
✓	*popsicle*	instead of	*obstacle*
✓	*shoulder*	instead of	*soldier*
✓	*cruising*	instead of	*cursing*
✓	*impotence*	instead of	*importance*
✓	*erotic*	instead of	*exotic*
✓	*witch*	instead of	*which*

Intervention and Support

Improper and inaccurate terminology is adding to the confusion in this matter. Many associations are speaking on behalf of millions who need accommodations in their schooling and in the workplace. Each association will use the definitions that they prefer and best represents the needs of those on behalf of which they advocate. The Canadian Dyslexia Association believes the research of the National Institute of Mental Health "*the definition of LD is too general and ambiguous to identify younger children at risk for learning failure before they fail*?"[15]

Dyslexia falls into the category of Learning Disabilities. But not all people with dyslexia are 'learning disabled'. They are completely competent learners when taught with the appropriate non-linear, multi-sensory techniques. I believe unless this difference is made we will keep on having kids who fail or we will keep on failing kids.

If dyslexia is not diagnosed properly and treated it may keep a child from reaching the level of achievement he is truly capable of. The consequences are that he will continue to fail and this may produce emotional problems. Once students have been diagnosed as dyslexic, they will require specific intervention and ongoing support if they are not to be further handicapped in their learning.

There are **three** levels of intervention and support:

① Specific language re-education (such as the SMT program)

② Specific accommodations to suit the student's learning style

③ A range of mixed ability teaching approaches.

Students with dyslexia require specific language training if they are to develop literacy skills. Based on research, the International Dyslexia Association, formerly known as the Orton Dyslexia Society, recommends that re-education programs for dyslexic students teach the following:

[15] http://www.house.gov/ed_workforce/hearings/107th/edr/idea6602/lyon.htm

Intervention and Support

Phonological/Phonemic Awareness

This awareness is the appreciation of larger chunks of sound, such as rhyme (e.g. Hand, band, and sand all share a final sound unit 'and'). Phonemic awareness is the understanding that words are made up of individual speech elements. Students must learn to separate spoken words into their component sounds. An understanding of the phonemes in the language is vital to teaching spelling to dyslexic students.

Sound - Symbol Association

This is the ability to pair a phoneme with its corresponding written letter(s). This association must go in both directions: from symbol to sound and from sound to symbol.

Syllable Instruction

Syllables are units of words that contain a single vowel sound. Students must learn to divide both spoken and written words into syllables and recognize the six types of English syllables.

Morphology

A morpheme is the smallest meaningful unit of language. The study of morphology allows students to understand how complex words are constructed from root words, suffixes and prefixes.

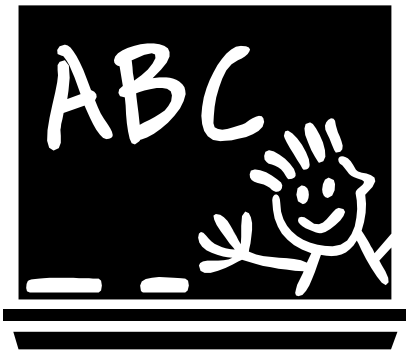
Syntax

This refers to the set of rules that governs the meaning of sentences according to the sequence and function of words.

Semantics

Semantics is that part of language that has meaning. From the beginning of reading instruction, an emphasis must be placed on reading comprehension.

Intervention and Support



People with dyslexia require special teaching programs to help them, as regular teaching approaches will not cater for their specific learning needs because they focus primarily on visual and auditory modalities only.

There are many different language training programs, to develop literacy skills, which are based on the Orton-Gillingham system. The program developed for the Canadian Dyslexia Centre is the Simultaneous Multisensory Teaching method (SMT) – a language re-education method developed to meet the needs of students of all ages. It is available in French and English and involves a number of sequential lessons.

Teaching programs for people with dyslexia must involve:

Simultaneous, multisensory teaching approaches – the student learns using the visual, auditory, kinesthetic and tactile senses simultaneously.

Systematic and cumulative instruction – each lesson is based on concepts taught in previous lessons. Lessons begin with the most basic concepts of language and progress to the most complex in a logical order.

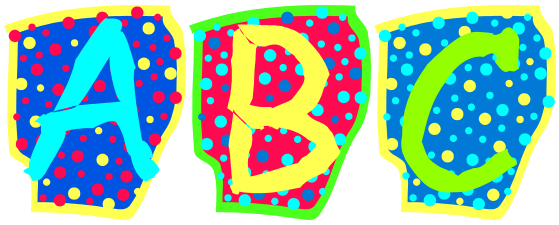
Direct Instruction – each concept is explicitly stated.

Diagnostic teaching – the pace and style of the instruction must be continually adapted to the student's needs.

Intervention and Support

Synthetic and analytic instruction –Synthetic instruction introduces the component parts of a concept and then it is explained how the component parts fit together. Analytic instruction presents the concepts and then describes how it may be broken down into its component parts.

People with all forms of dyslexia will make progress with the SMT program, however the rate of progress will depend on the type and severity of the dyslexia. Generally, the more severe the dyslexia, the slower the rate of progress will be.



The SMT Method

The SMT Method

Talking, listening, reading and writing are all related to language. The first two are innate in humans. Even young children pick up on the sounds of speech, pick up spoken language and unconsciously master its structure, whether or not they receive clear instruction. This is not the case for written language.

Opposing views have long since existed for teaching reading. Some favor a method based on a visual recognition of words within a contextual search for their meaning. Others propose an analytical method in which the structure of written language is learned based on phonetics. The SMT Method was born in the classroom through experience.

For the first group, the visual recognition and decoding of words come naturally by reading. This excludes the need to teach the relationship between letters and their sounds. For the second group, on the contrary, learning to read is a gradual process that requires a systematic teaching method.

Research by Sally Shaywitz, has shown that to learn to read, all children must discover that words in spoken language can be broken down into small units of sound called phonemes. In dyslexics, the part of the brain that processes this function is affected; this impacts on the following steps.

The standard method of reading instruction is not effective for dyslexics. They need a systematic, explicit and sequential teaching method. They need to learn why words are spelled or pronounced in a certain way.

The SMT Method

Included in the S.M.T. teaching approaches is the following learning techniques and strategies:

- visual and auditory discrimination;
- bimanual reading in Braille dots to develop a "tactile vision";
- direct teaching of non-image words;
- an emphasis on diction;
- the etymology of English words.

Advantages of The SMT Method

- It can be taught to students of all ages and all grade levels.
- It allows much earlier intervention for dyslexic children, even if they have not been formally diagnosed, because it can be taught as early as grade 1.
- Although developed specifically for dyslexic students, this method can be used for all grade 1 children to prevent reading failure and to reduce the need for remedial help later.
- SMT can be adapted to a group of students.
- Because each lesson is detailed and meticulously prepared, teachers, tutors and parents can be taught the program within 2 days. See information on the web site: www.dyslexiacentre.ca
- Teachers and tutors can be certified by producing a video of a tutoring session. The certified tutors or teachers can in turn train others.

Daily Lesson Plan

The lesson plans are based on the Orton-Gillingham-Child's concepts.

The following have been adapted from the French version of this program, EMS:

- Kinesthetic and tactile review;
- Auditory and visual discrimination;
- Laterality and directionality exercises;
- Non-image words, Red words, Nonsense words;
- Copying/dictation, Phonological/phoneme awareness, Tongue twisters.

The SMT Method

Each lesson includes the following 20 steps:

I. ALPHABET

Purpose
- To develop alphabetizing skills.
- To develop the ability to quickly find a word in a dictionary.

II. GRAPHEME AND KEYWORD REVIEW

Purpose
- To develop the ability to recognize letters.
- To associate each letter with its corresponding sound.
- To develop the memory of movement required to write the letters.

III. PHONEME REVIEW

Purpose
- To develop the ability to translate a phoneme into its corresponding grapheme.
- To learn the most frequent spelling of the speech sounds (e.g. / k / = k, c, //ck, ck).

IV. KINESTHETIC AND TACTILE REVIEW

Purpose
- To develop the ability to automatically remember the movements required to write all the letters of the alphabet.

V. CONCEPT REVIEW

Purpose
- To help the student memorize the concepts, grammar, and spelling rules taught.

The concept cards are used to facilitate the learning of grammar rules. Certain concepts might be too advanced for some students. Therefore, their use is at the discretion of the teacher.

VI. AUDITORY DISCRIMINATION

Purpose
- To develop the ability to distinguish differences between sounds.
- To develop the auditory sequential memory.

VII. VISUAL DISCRIMINATION

Purpose
- To develop the ability to distinguish the visual differences between letters.

VIII. LATERALITY AND DIRECTIONALITY EXERCISES

Purpose
- To develop an awareness of one's own left and right.
- To develop good directionality skills.

IX. INTRODUCTION OF A NEW LETTER (8 LINKAGES)

DISCOVERING THE NEW SOUND

Purpose
- To link all properties of a letter (name, sound, graphic representation and "feel" when pronounced or written) through every pathway (visual, auditory, kinesthetic, tactile).

N.B. : The writing frame is used to develop the memory of movement for writing letters. It is not used for handwriting.

1st LINKAGE

Purpose
- Association of a letter's name with its graphic representation, keyword and sound.

2nd LINKAGE

Purpose
- Association of the cursive form of the letter with its name.

3rd LINKAGE

Purpose

- Association of the graphic representation of the letter with its name, and its cursive form.

4th LINKAGE 

Purpose

- Association of the letter's name with its cursive form.

5th LINKAGE

Purpose

- Association of the letter's keyword and its sound, and the memory of movement required to write its cursive form.

6th LINKAGE

Purpose

- Association of the graphic representation of the letter with its name, its sound, and keyword.

7th LINKAGE

Purpose

- Association of the name of the letter with its sound.

8th LINKAGE 

Purpose

- Association of the letter's name and cursive form with its speech sound.

X. HANDWRITING 

Purpose

- To develop and enjoy the art of penmanship.

N.B.: The handwriting program used in this program was created by the Ministry of Education of Quebec.
Certain clinical studies seem to show that dysgraphic students who have used this program show beautiful penmanship during handwriting exercises.

XI. HEALTH BREAK (one minute)

Purpose

- To increase the level of energy and concentration.

XII. NON-IMAGE WORDS 

Purpose

- Students with dyslexia usually have problems with non-image words, such as prepositions, since they cannot easily create a visual image of their meaning. Therefore the dyslexic student either guesses or skips those words. The student must develop the ability to create a visual image of non-image words.

XIII. RED WORDS 

Purpose

- To learn how to spell irregular words.
- Students with dyseidesia see visual image of the meaning of words "in their heads," but have great difficulty in seeing the graphic representation of words "in their heads."
- Although they can apply phonetic spelling rules to regular words, they have difficulty memorizing the spelling of non-phonetic words. It is easier for a person with dyseidesia to learn these words the same way a blind person learns, through the tactile sense.
- In the English language only 13% of the words are phonetically irregular.

XIV. READING 

Purpose (nonsense words)

- To prevent guessing behaviour.

Purpose (words and sentences)

- To practice decoding skills and syllable division.
- To be aware that accuracy in decoding skills precedes comprehension and speed.
- To practice hearing ones own voice.

XV. COPYING/DICTATION 

COPY

Purpose

- To develop the ability to copy text from near-and far point.

DICTATION

Purpose

- To increase the student's auditory sequential memory.

XVI. PHONOLOGICAL/PHONEME AWARENESS

Purpose

- To develop the ability to identify the sounds in words.
- To develop the awareness of the individual speech sounds in words.

XVII. SPELLING 

Purpose

- To learn a series of sequential steps for spelling phonetically regular words by applying spelling rules.
- To learn to spell irregular words.

XVIII. TONGUE TWISTERS

Purpose

- To develop the ability to articulate clearly.

XIX. ORAL/WRITTEN EXPRESSION 

Purpose

- To develop the ability to communicate in well-formulated sentences.
- To develop the ability to express ideas in writing, in an organized manner, using punctuation marks, etc.

To help the student verbalize what is read.

XX. LISTENING COMPREHENSION

Purpose

- To develop comprehension skills.
- To develop the joy of reading good literature.

Accommodations in Depth

Test Accommodations

The Canadian Human Rights requires that "reasonable accommodations" must be provided for dyslexic students. The difficulties for dyslexic students will become even more noticeable in situations such as tests or exams where the dyslexic person has to demonstrate his/her knowledge or capability within a time limit. Dyslexic students may then become so stressed that they temporarily forget everything they know.

Remember: A test is meant to measure what a student **does** know rather than what he **does not**. It should not be a test of linguistic ability. Testing material falls into the category of unassisted reading material.

The reading level of the test, therefore, should be **at least two grade levels below** the student's level of reading. Reading level can be measured using the Fry (Readability) Chart. The language used in the test, if the readability level is too high, could **invalidate** the test. **Dr. Kathie Nunley**

Not all accommodations are necessary for all dyslexic students but the following are the most reasonable:

- give extra time to complete the examination
- give an oral examination while the student has a written copy of the test questions
- accept tape recorded or dictated answers to questions
- allow a reader with good pronunciation skills
- provide a private exam room without fluorescent lights
- used colored paper
- allow a short 'health break'
- accept poor grammar and spelling mistakes

Accommodations in Depth

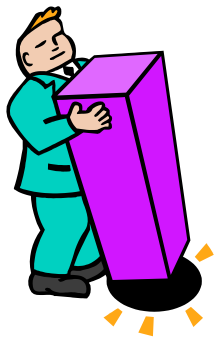
- avoid trick questions in multiple choice questions
- underline key words such as: at, after, not, etc. on tests
- avoid asking questions which contain double negatives
- underline the key word in negative questions, such as: Which country is **not** in South America?
- avoid essay tests as much as possible. (It could take a dyslexic person significantly longer than a regular student to complete an essay.)
- use fill-in-the-blank, match up type tests instead of long essays
- do not hesitate to clarify a particular exam question
- give an explanation of your meaning of words such as: define, clarify, identify
- be specific when writing "Answer the following questions" such as:

    1. **Maximum** 1 or 2 lines
    2. **Maximum** 1 or 2 paragraphs
    3. **Maximum** 1 or 2 pages

- allow a scribe/amanuensis knowledgeable on the subject matter, to read, write and/or type the examination paper, when needed

- to ensure an adequate evaluation of the student's knowledge, give the dyslexic student **a choice** of the test format more suited to his/her type of dyslexia such as: essay style, multiple choice, oral presentation, fill-in-the-blanks.

A summary sheet to record the accommodations needed for a student with dyslexia is provided in Appendix 5. Appendix 6 provides a sample sheet to be attached to the front of each examination booklet for a dyslexic student. (This is the sample sheet used by dyslexic students at Oxford University)



Accommodations in Depth

The following class accommodations may assist the student. Not all students with dyslexia will require all of these accommodations. It is important to negotiate accommodations directly with student. This should be done privately to avoid embarrassing the student in front of his peers. A summary sheet is also provided (Appendix 5). This can be kept on file and shared with other teachers so that they are aware of the student's individual learning needs.

- permit tape recoding or make your typewritten notes available
- do not penalize the student for failure to speak publicly in class
- give visual support as much as possible
- give short, precise instructions in writing as well as oral instructions
- avoid complex language
- use coloured paper and/or larger print if needed
- use a type face which is easier to read (the teacher could ask the student)
- write legibly on the board or on the student's paper
- allow the student to take a photograph of the notes with a digital camera
- avoid fluorescent lighting
- avoid vertical and/or horizontal blinds in the viewing range of the student
- teachers should avoid clothing with black/white stripes or checks
- avoid cluttered text

Accommodations in Depth

Equipment and Technology

Books on Tape

Recording for the Blind and Dyslexic: Tapes are available for dyslexics. The RFBD has an extensive library of books, including school books. www.rfbd.org

Computer Software

There are a number of screen reading and voice recognition programs. Text help Systems (www.texthelp.com) offers some excellent programs. These include:

ChromoGen Lenses

A few students with dyslexia experience visual perceptual distortions where the text appears to move or blur, or to be broken up by distracting patterns. ChromoGen Lenses are a series of visual filters prescribed independently for each side of the visual system (haploscipally). In clinical trials, ChromoGen filters have been proved to increase reading ability by improving the ease of reading, on average by increasing reading speed by 22 per cent.

Teaching Approaches

Catering effectively for students with varying learning needs, including students with dyslexia, is not about 'changing the student' to fit the programs. Current research into teaching methodology promotes valuing individual differences and catering for them in our schools. This means that what our schools really need to do is to change their programs and the way that they teach to better meet the needs of all students.

The following teaching approaches will support students with dyslexia in mainstream classrooms:

Multisensory Teaching

This involves teaching to all modalities rather than only auditory and visual learning channels. Traditional classroom instruction (beyond second grade) tends to use predominantly visual and auditory modalities. Dyslexic students, however, learn best when information is presented simultaneously using visual, auditory and kinesthetic modalities. This opens up new possibilities and challenges for teachers to be creative in their lesson planning.

Teaching Approaches

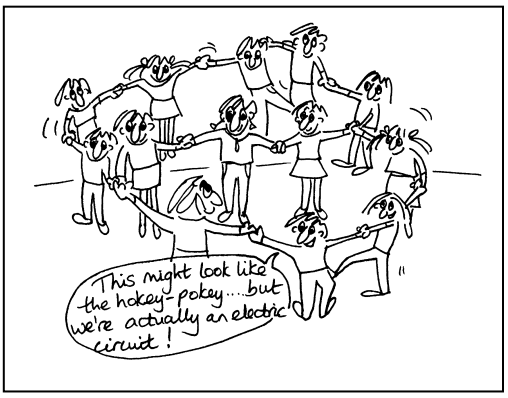
The following chart outlines the strengths of each learning style:

Visual Learners	Auditory Learners	Kinaesthetic Learners
* Can cram information quickly * Look inwards to their thoughts * Are organised and orderly * Are observant * Retain most information but for a shorter time * Are quieter in a group * Are concerned about their appearance * Have a perfectionist approach * Are better spellers * Memorise by seeing pictures * Are easily distracted by sounds * Have trouble remembering verbal instructions * Attention wanders if there is too much talking * Are more involved with content and task than with people * Can rearrange information quickly * Vivid imagination which enables them to see possibilities. * Good planning skills	* Talk to themselves * Can be easily distracted by sounds * Need to record information in their brains * Move their lips/say words when reading * Need to repeat to memorise * Find math and writing more difficult * Find spoken language easier * Speak in a rhythmic pattern * Like music * Like talking * Can mimic tone, timbre and pitch * Learn by listening to sequences and chunks of information * Memorise, by steps, a sequence of procedures * Process their thoughts out loud * Need to voice their opinion * Store information vocally	* Remember through their muscles (touching, feeling, doing) * Respond to physical reward * Touch people and stand close * Are physically oriented * Have good long term memory * Move a lot * Display larger physical and emotional reactions * Show early large muscle development * Learn by doing things repeatedly * Learn by practical experience * Memorise by ‘walking through it’ * Point to words when reading * Find that words do no mean a lot * Gesture a lot * Become restless very easily * Store information by body movement * Respond physically * Memorise by location * Prefer to do things rather than read about them.

Teaching Approaches

The following strategies can be used in each of these teaching methodologies to support students with dyslexia:

- Concept mapping
- Word splashes
- Three level questions
- Computer software (voice recognition/ screen reading)
- Graphic Organizers
- Oral presentations
- Taped assignments
- Listening posts
- Cueing students in (prior to the start of the lesson/unit)
- Vocabulary lists provided in advance



Further Reading and Research

Dyslexia is genetically inherited, and its cause is biological. According to Albert M. Galaburda, Associate Professor of Neurology at the Harvard Medical School, sufficient scientific evidence accumulated in the last decade confirms that dyslexia stems from neurological causes. Proof has been obtained from both anatomical observations of autopsy specimens and imaging studies of living subjects.[16]

As Galaburda notes, "*Anatomical evidence suggests there are differences in the symmetry of brains of dyslexics, in the specific areas dealing with language. This form of symmetry indicates that the language areas of dyslexics are organized differently and that they probably process linguistic information differently as well*." [17]

Contrary to the majority, dyslexics think in pictures instead of words. The translation of those images into words takes more time. This visual ability also translates not only into quantity but also quality. Dyslexics can see easily in 3-D. When looking at an object, they can view it simultaneously from different perspectives. This works wonders for creativity, inventions, but chaos for reading. If you look at a pencil upside-down, it is still a pencil. If you look at the letter "p", it suddenly becomes a "b" or a "d". To a dyslexic it is simply a little line with a loop on it. It does not matter if it is on the right or the left or upside down.

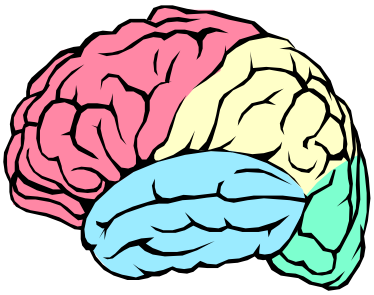
According to neuro-physicist Todd Richards, Ph.D. the brains of persons with dyslexia work five times harder than other peoples' brains to complete the same tasks. [18]

Dr. Sally Shaywitz, from Yale University, has found that persons with dyslexia learn language by using parts of the brain not usually used to process language.

Dr. John Stein, from Oxford University has done extensive research in the visual processing systems of people with dyslexia. He believes that unstable eye-movement can cause "letters and words appear to move around, jump over each other, blur and reverse themselves"…"dyslexia

[16] Dyslexia Concerns us! Louise Brazeau
[17] *Ibid.*
[18] Dyslexic children use nearly five times the brain area: October 4, 1999

has widespread manifestations which are not at all confined to reading. However they are best thought of as individual differences between people rather that a consequence of neurological disease".[19]



Because dyslexics read or write slowly, poorly and inefficiently, it does not mean they are slow learners. They simply learn differently. Their I.Q. ranges from the average to the gifted range. They are often called visual-spatial learners. This means that they learn holistically rather than in a step-by-step fashion. In other words they see the whole picture "right away'' like a web.

This brain difference often results in significant strengths in the areas controlled by the right side of the brain, such as visual-spatial skills, problem solving skills, creative skills and mechanical abilities. The major strength of most people with dyslexia is their intuition. They often see the answer to a problem in an instant.

While dyslexics may have difficulties reading they, on the other hand, have an extraordinary ability to 'read' people and 'read between the lines'. They often 'hear' what the other is 'thinking'. They carefully watch body language and often are so adept at 'reading' a teacher's feelings towards them that they will say " the teacher thinks that I'm stupid''. It is the opposite with the people who have a Non-verbal Learning Disability. They can read well but 'have great difficulty ''reading people'' It is important to open our minds to this difference to better understand dyslexia and help people with Non-verbal Learning Disabilities.

[19] J. Stein (2000): The neurobiology of reading difficulties. Prostaglandins, Leukotrienes and Essential Fatty Acids Vol. 63, No. 1/2m July/August. Pp. 109-116

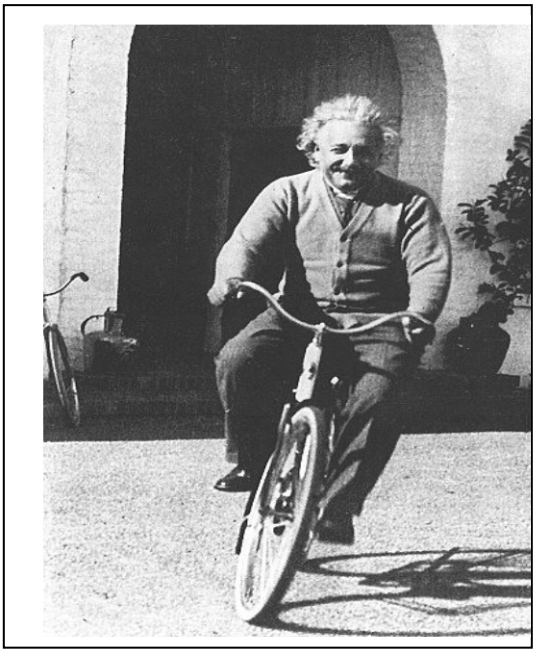
Further Reading and Research

"We all learn best in our own ways. Some people do better studying one subject at a time, while some do better studying three things at once. Some people do best studying in a structured, linear way, while others do best jumping around, 'surrounding' a subject rather than traversing it. Some people prefer to learn by manipulating models, and others by reading." [20] ***Bill* Gates**

"*It has become increasingly clear in recent years that dyslexics themselves are frequently endowed with high talents in many areas*." **Norman Geschwind**

Geschwind shocked the audience at an address to the Orton Dyslexia Society in 1982 with his opening remark when he described dyslexia as: "*the pathology of superiority*".

Over 50% of NASA employees are dyslexic. They are deliberately sought after because they have superb problem-solving skills and excellent 3D and spatial awareness.[21]



"*Dyslexics are over represented in the top ranks of people who are unusually insightful, who bring a new perspective, who think out of the box.*"[22]

[20] www.cyber-nation.com/victory/quotations/quotes_menu.html
[21] http://www.blueclickpr.com/news/News5.htm#top May 19, 2002
[22] http://www.fortune.com/indexw.jhtml?channel=jhtml&doc_id=207655 May19, 2002

Further Reading and Research

Thomas G. West, author of In the Mind's Eye wrote the following: '' An article in a recent issue of Fortune magazine addressed corporate Chief Executive Officers and other business leaders in this way:

> When people think about dyslexia and related disabilities, they are usually (almost by definition) concerned with a set of problems and they focus mainly on ways to fix these problems. However, now it is important to begin to focus on the other side. We need to focus not on the problems but on the gifts and talents and special abilities that often come along with the difficulties. In its broadest meaning, dyslexia means trouble with words — words read, words written, words spoken, words recalled on demand, words organized, words memorized with complex rules from foreign languages.
>
> Surprisingly, along with these difficulties with words, often (but not always) there comes a varied set of special visual and spatial abilities. In recent years, neurological research has provided a possible explanation for this pattern. There is evidence that some forms of early brain growth and development tend to produce verbal and other learning difficulties at the same time that they produce a variety of exceptional visual and spatial talents. Furthermore, some psychologists have argued that visual-spatial abilities should be seen as a special form of intelligence, on a par with verbal or logical-mathematical or other forms of intelligence. Yet, for a long time our educational system has focused mainly —almost exclusively — on one form of intelligence.
>
> For many decades, scientists, mathematicians and other professionals have tried to turn away from visual approaches as much as possible. There did not seem to be sufficient precision and logical rigor. Words, symbol manipulation and numbers had high status. Pictures were for children. Now these visual approaches are being returned to central positions in many fields once again. Many researchers are now focusing on data visualization — arguing that only graphically-oriented technologies and modes of analysis are capable of dealing with today's complex problems and massive volumes

of data. But these new approaches place new demands on the abilities of individual researchers and workers at all levels — requiring visual proficiencies that not all have in equal measure.

Indeed, for some 400 or 500 years our schools have been teaching fundamentally the skills of a medieval clerk — reading, writing, counting and memorizing texts. Today, it seems we are on the verge of a really new era when we will be required to develop, whether we want to or not, a very different set of visually-based talents and skills — like those of a Renaissance thinker such as Leonardo de Vinci rather than those of the clerk or scholar or schoolman of the Middle Ages.

In the not too distant future — as the Fortune article suggests — computers will be the best clerks. Accordingly, we all must learn to develop distinctly human talents, and these are likely to involve the insightful and broadly integrative capacities associated with visual and spatial modes of thought. Thus, we are presented with a most unexpected pattern — that some of those who have most difficulty learning old knowledge (especially when based on memorized words and texts) — may be exceptionally well suited to creating new knowledge (especially when derived from rich, dynamic mental models and many-dimensional visualizations of exceedingly complex systems). For many in this group, the “easy things” in the early school years are hard, but later the “hard things” in technical schools and professional schools become easy. This pattern is difficult for many to understand or to believe, yet the evidence mounts.

More and more of those working at the edge of these new technologies, in the sciences as well as business or the professions, are coming to recognize these surprising trends. For example, Dr. Larry Smarr, a physicist, astronomer and director of a supercomputer center, has commented: “I have often argued in my public talks that the graduate education process that produces physicists is totally skewed to selecting those with analytic skills and rejecting those with visual or holistic skills. I have claimed that with the rise of scientific visualization as a new mode of scientific discovery, a new class of

minds will arise as scientists. In my own life, my 'guru' in computational science was a dyslexic and he certainly saw the world in a different and much more effective manner than his colleagues.

Accordingly, we may soon come to discover we have wasted much — in lost time and lost self-esteem — by focusing on "basic skills" when we should have been focusing on the high-level thinking, mental modeling and visualization skills sometimes hidden beneath a variety of academic weaknesses. After all, young people must make their way in the world based on what they can do better than others — not on the "basics" which, by definition, can be done by many.

This new approach will, of course, probably be difficult since it will involve re-educating ourselves about the new demands of a changing world as much as educating others. But if we can learn to see the world in this new way, then we may find that we are surrounded by much more talent than we might otherwise have imagined. In the end, amid an economic landscape where long-held beliefs concerning education and career are daily being profoundly shaken, we may come to find that many of those who have been clearly ill suited for the last remnants of a 19th-century educational system and workplace may turn out to be superlatively well suited for the "new economy" of an emerging 21st-century educational system and workplace.[23]

[23] Dyslexia concerns us! Louise Brazeau

Common Questions, Expert Answers

In this section, I will try to answer some of the most common asked questions.

Some school personnel say that they don't like to use the word 'dyslexic'. They prefer the word 'learning disabilities'. What is the difference?

LD is frequently used as a synonym for dyslexia. Dyslexia falls into the broad category of LD. The term 'LD' should be used to establish policies and to speak for the millions of people with LD. However, to make proper accommodations, one must know 'what to accommodate'. After all, when a person has an allergy to penicillin, the doctor will not write 'allergy' on the patient's chart, but will mark 'allergy to penicillin'. Imagine what would happen if in fact he just wrote 'allergy' and did not tell the patient that he was allergic to penicillin! This may sound absurd but this is exactly what happens when we treat all 'LD' the same way.

What are the different types of difficulties included in Learning Disabilities (LD)?

The following are the two major sub-types of LD.

1. Dyslexia and related disorders (listening, speaking, reading, writing, spelling)
2. Non-verbal learning disabilities (writing, oral comprehension, math reasoning, impaired social skills)

Why is their so much confusion about the definition of LD?

Some students labeled as LD are dyslexics and have difficulties with reading, writing, and spelling. Other students who are not dyslexics have impaired social skills and are also considered to be LD. Although they need help understanding social interactions, they usually read better than average children. Some are 'slow learners' or have behavior problems and they are also included in the LD group by the pressure of advocacy of their parents.

Each of these groups of exceptional children needs to be thought about differently for it is not enough to group them as having 'learning disabilities'. It really makes

no sense to group them in an LD class unless the teacher has a detailed understanding of their individual needs and develops individual programs.

The National Institute of Mental Health has done extensive research in Learning Disabilities and they found that *‘’most studies of LD over the past 20 years have attempted to understand the disorder by studying individuals who were grouped according to the vague and ambiguous label "Learning Disabled." This was unfortunate. As many scientists have recently pointed out, it simply makes little sense to conduct investigations of some broadly defined entity called ‘learning disability’ given what we already know about the differences between the various types of learning disabilities.’’*

What has been learned from the NICHD research?

During the past 10 years, NICHD research has concentrated on reading disabilities as a specific LD. This is because reading disabilities are the most common subtypes of LD and clearly the most damaging in terms of an individual's school learning, school adjustment, and occupational and vocational success. These findings are summarized below:

- Definitional issues continue to be the single greatest impediment to understanding learning disabilities and to helping children and adults with LD.
- The use of the general term ‘learning disabilities’ in research practice may hinder our ultimate understanding of the causes, developmental courses, and outcomes of the specific types of disabilities subsumed within the LD category.
- The research community must grapple with the need to address each type of LD in its own right to arrive at clear definitional statements and a coherent understanding of etiology, diagnosis, prevention, and treatment. This particular finding does not, in any way, detract from the clear need to

continue to use the term learning disabilities in forging public policy and speaking for the millions of individuals whose lives are affected by LD.

- Language-based reading disabilities are the most prevalent type of LD and affect about 17% of school-age children to some degree. This reading difficulty is typically reflected in inaccurate and slow decoding and word recognition. This painstaking reading of single words often impedes the individual's ability to understand what has been read, even though listening comprehension is adequate.
- While other factors will no doubt be identified as contributing to reading disability, deficits in phonological processing appear to reflect the major impediment to learning to read. Deficits in phonological processing are characterized by difficulties in segmenting syllables and words into constituent sound units called phonemes; in short, there is a difficulty in turning spelling into sounds.
- Shortfalls in phonological processing can be identified in late kindergarten and first grade, and the presence of these deficits is a strong indicator that difficulties in learning to read will follow.
- Shortfalls in phonological processing are heritable, as shown in both behavioural and molecular genetic studies. Likewise, language-based reading disabilities are highly related to significant differences in neural processing.
- Although we now have the ability to identify children who are at-risk for reading failure, and we now understand some of the instructional conditions that must be considered for teaching, most of LD readers are not identified until the third-grade. This is clearly too late. Seventy-five per cent of children identified after nine years-of-age continue to display reading difficulties throughout high school.
- Despite the widely held belief that boys are more likely to have reading disabilities than girls, research has shown that as many girls as boys have

difficulties learning to read. More boys are identified by teachers in school because of their tendency to be more rowdy and active than girls.

- The most powerful interventions that have been identified for reading disabilities to date consist of a combination of explicit instruction in phonemic awareness, explicit instruction in sound-symbol relationships (phonics), and direct and integrated instruction in text reading and comprehension. This balanced approach appears to be necessary for adults as well as children with reading disabilities.
- Unfortunately, teachers remain seriously unprepared to address individual differences in many academic skills, but particularly reading. However, teachers cannot be expected to know what they have not been taught. Specifically, current university-based teacher preparation programs have been found to be inadequate for preparing teachers to address reading disabilities and other types of LD. [24]

Who should identify the student as dyslexic?

There is much disagreement on this subject. In Canada, many institutions only use the term 'Learning Disabled'. This term is often reserved to clinical psychologist. But unfortunately many psychologists are not trained to diagnose dyslexia. Many refer to the Canadian Dyslexia Centre for help in assessing students suspected of having dyslexia.

The Canadian Dyslexia Centre has trained over 500 professionals which includes: physicians, psychiatrists, neuropsychologists, school psychologists, special education specialists, teachers, reading specialists, etc.

In the USA Assessment of reading/learning disabilities is being shifted to the hands of the classroom teacher. [25]

[24] http://www.ldonline.org/ld_indepth/reading/nih_report.html
[25] Reading disability" or "learning disability": The debate, models of dyslexia, and a review of research-validated reading programs.http://www.ldonline.org/ld_indepth/reading/reading_approaches.html Posted March 18, 2003.

In many states in the US, both terms are used. 'Dyslexia 'is used for persons with the condition of **Dyslexia and Related Disorders**. The term 'Learning Disabled' is used to identify students in need of **Special Education Services.**

There is no 'Dyslexia Law' in Canada but in the States where such a law exists, the following is recommended:
"Someone who knows about dyslexia and related disorders and also about appropriate remedial instruction for students with dyslexia must make the diagnosis. An intelligence test alone is not adequate to determine the presence of dyslexia. At best, it will reveal if someone has a psychological profile that is often seen in people with dyslexia".

The following is an excerpt from a court case involving failure by a psychologist to identify a student as having dyslexia.

"Petitioner specifically identified the following qualifications that the assessor or assessors should possess: training in dyslexia, dysgraphia, and related language-learning difficulties, and experience in assessing those areas'' "despite student's long history of language-based learning difficulties and his acknowledged learning disabilities in reading and written language, the District has never tested STUDENT for dyslexia or utilized any tests for STUDENT except the same three tests, the WISC, WJ-R Tests of Achievement, and BGT. Petitioner argued that a more comprehensive assessment of student's language skills is needed." Case Number 620, Case Year 2000, Decision, San Jose Unified School District

Common Questions, Expert Answers

In the state of Louisiana the screening, assessment and evaluation for dyslexia is conducted by the following trained professionals:

Screening, Assessment: *Students with characteristics of dyslexia*

- teachers certified in reading, language arts, special education, or elementary education;
- guidance counsellors;
- curriculum specialists in language arts;
- speech/language pathologists;
- educational diagnosticians;
- school psychologists;
- screening specialists
- occupational therapists.

Evaluation (IEP): *Students Learning Disabled with the condition of dyslexia*

- qualified examiners

http://www.doe.state.la.us/doe/asps/home.asp?I=DYS

A very good reference on dyslexia is the Dyslexia Handbook from Texas

http://www.tea.state.tx.us/special.ed/reading/pdf/dyslexxiahdbk.pdf

My teacher says that my child is too young and that we should wait, because he will probably outgrow his reading difficulties. What should I do?

"We have learned that for 85 to 90 per cent of poor readers, prevention and early intervention programs that combine instruction in phoneme awareness, phonics, spelling, reading fluency, and reading comprehension strategies provided by well-trained teachers can increase reading skills to average reading levels. However, we have also learned that if we delay early intervention until nine-years-of-age, (the time that most children with reading difficulties first receive services), around 75 per cent of these children will continue to have difficulties learning to read throughout high school and their adult years. To be clear, while older children and adults can be taught to read, the time and

expense of doing so is enormous compared to what is required to teach them when they are five or six years old.''

"We have learned the average cost of assessing each child during kindergarten or first grade with the predictive measures is about $10 to $15. This cost estimate includes the costs of the assessment materials.''

http://www.ldonline.org/ld_indepth/reading/nih_report.html

Is dyslexia and ADD the same?

No. Dyslexia and ADD are different. However, they may coexist. ADD makes it difficult for a student to concentrate in all situations, not just during reading, spelling and writing tasks.

What remedial program is recommended for dyslexia?

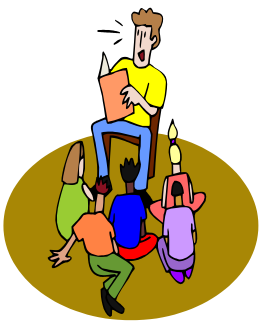
According to the National Institute of Mental Health and the Department of National Revenue in Canada, the Orton-Gillingham based method is the only recognized intervention for dyslexia.

''The Orton-Gillingham Method is a structured and highly organized method and uses the multisensory method in teaching. It uses all the senses to educate. Medically, this method is essential to treating the disorder.'' 91 DTC 816 Tax Court of Canada, Court File No. 90-1931

Where can I get such a program?

There are many good Orton-Gillingham multisensory programs in the USA such as: the Texas Scottish Rite Program, Alphabetic Program.In Canada, the Canadian Dyslexia Centre has developed the Simultaneous Multisensory Teaching method (SMT),

The SMT method based on the Orton-Gillingham methodology is a language re-education method developed to meet the needs of students of all ages. The Centre offers training for teachers and parents. Information available on the web site : www.dyslexiacentre.ca



In Good Company

Famous people with dyslexia. *This partial list was compiled from a range of sources (books, articles, newspapers and websites.)*

Author/Writers/Journalists	
Georges Bernard Shaw	Jeanne Betancourt
Victor Villasenor	Agatha Christie
Jules Verne	Patricia Polacco
Zelda West-Meads	Edward Hallowell, MD
Edgar Allan Poe	Lynda La Plante
Alexander Pope	F. Scott Fitzgerald
Rudvard Kipling	Tomina Edmark
Hans Christian Anderson	Sophie Fisher
Mark Twain	Stephen J. Cannell
Milton	Dale S. Brown
Esther Freud	Alex Cohen
Jonathan Dalby	Robert Scheer
Gustave Faubert	Nola D. Chee
Sophy Fisher	Eileen Simpson
Dorothy Einon	Earnest Hemingway
A.A. Gill	Debbie Macomber
Matthew Sturgis	Patricia Polacco
Lord Willis	Girard Sagmiller
William Butler Yeats	Prophet Joseph Smith
Murray Lachlan Young	Elizabeth Daniels Squire
Gary Chapman	Victor Villasenor
Artists	
Pablo Ruiz Picvasso	Leonardo Da Vinci
Vincent VanGogh	David Bailey
Chuck Close	Robert Rauschenberg
John Irving	Mozart
Auguste Rodin	Beethoven
François Schuiten	Anthony Gormley
Politicians/Military/Aviation	
General George S. Patton	Dwight D. Eisenhower
Winston Churchill	Benjamin Franklin
Georges Washington	Carolyn McCarthy
William Childs Westmoreland	George Bush
Woodrow Wilson	Frank Dunkle
Nelson Rockefeller	Charles Lindburgh
Thomas H. Kean	Anna Eleanor Roosevelt
John F. Kennedy	Lyndon Johnson
Robert Kennedy	Nicholas Brady
Lorna Fitzsimmons	Andrew Jackson

In Good Company

Scientists/Inventors/Researchers/Medicine/Education/Law	
Albert Einstein Sir Isaac Newton Eli Whitney John VonNeumann Thomas Edison Dr. Matthew Lovelock John Robert Skoyles Jeffrey H. Gallet Erin Brockovich David Boies Dr. Simon Clemmet Fred Epstein Nancy L. Sonnabend William Matthew Dr. Helen Taussig John W. House, M.D. John Horner Charles Darwin	Ann Bancroft Alexander Graham Bell Harvey Cushing Michael Faraday William Lear Jon R. Horner Galileo Steven Hawkings Louis Pasteur Dr. Larry Silver Paul Ehrlich Dr. Donald Lyman Dr. Elizabeth Wiig Abbott Lawrence Lowell Dr. Ann McGee-Cooper William Simmons, MD Sylvia Law Werner Von Braun
Business	
Nicholas Negroponte Wright Brothers Charles Schwab Alex Strauss Alex Branson Paul J. Orfalea Henry Ford Anita Roddick Fred Curry Drexel Burnham G. Chris Anderson Bill Gates Ronald Davis Neil Bush Malcome Goodridge William Doyle Weyerhauser family Wrigley	Terry Bowersock Stephen Bacque John Corcoran Fred Curry William Hewlett F.W. Woolworth Mark Torrance Russell Varian Craig McCaw Fred Friendly Mike Drury Hamish Grant David Fogel Lord Alex Rogers Mike Norris John Chambers Arthur Ochs Sulzberger
Royalty	
Olaf – King of Norway (and his children) King Carl XVI of Sweden	Prince Charles Prince William Duke of Westminster

In Good Company

Actors/Musicians/Singers/Television/Movies	
Cher	Susan Hampshire
Whoopi Goldberg	Margi Clarke
Brian Conley	Adie Allen
Tom Cruise	Fanny Flagg
Anthony Andrews	Walt Disney
Henry Winkler	Harry Anderson
Marlon Brando	Anthony Andrews
Sarah Brightman	Harry Belafonte
Georges C. Scott	George Burns
Lindsay Wagner	Fred Astaire
Tom Smothers	Enrico Caruso
Sylvester Stallone	Jay Lenno
Michael Barrymore	Brad Little
Steve McQueen	Robin Williams
Edward Matthew Olmos	Harrison Ford
Danny Glover	Zsa Zsa Gabor
Tracey Gold	Dustin Hoffman
Bob Jiminez	Jack Nicholson
David Jones	Guy Ritchie
Noel Gallagher	Anthea Turner
Liam Gallagher	Felicity Kendall
Loretta Young	Oliver Reed
Athletes	
Eric Wynalda	Bruce Jenner
Russell White	Ellie Hawkins
Nolan Ryan	Sir Steven Redgrave
Jackie Stewart	Dennis Bergkamp
Greg Louganis	Chris Boardman
Dexter Manley	Peter Rose
Dan O'Brian	Carl Lewis
Muhammad Ali	Brooke Theiss
Magic Johnson	Joe Montana

Glossary

Accommodations - Techniques and materials that allow individuals with LD to complete school or work tasks with greater ease and effectiveness. Examples include spellcheckers, tape recorders, and expanded time for completing assignments.

Asperger Syndrome (AS) - A developmental disability characterized by normal intelligence, motor clumsiness, eccentric interests, and a limited ability to appreciate social nuances.

Assessment - Provides information and data that answer a specific set of questions for future planning, implementation, and evaluation.

Assessment, Formal - Provides data through standardized, norm, or criterion-referenced instruments which have specific directions for administration, scoring, and interpretation.

Attention Deficit Disorder (ADD) - A severe difficulty in focusing and maintaining attention. Often leads to learning and behaviour problems at home, school, and work. Also called Attention Deficit Hyperactivity Disorder (ADHD).

Auditory - Relating to hearing.

Auditory Discrimination - The ability to distinguish (to discriminate) between sounds that are heard and sounds which may be somewhat alike.

Auditory Figure-Ground - The ability to concentrate on the task at hand despite the presence of other sounds (voices, miscellaneous noises) within the same environment.

Auditory Memory - The ability to remember information received through the auditory channel.

Auditory Processing - The ability to act upon auditory information in order to generalize, abstract, classify, integrate, etc.

Auditory-Visual Association - Ability to switch from the auditory to the visual channel from learning through the ears to learning through the eyes. Included is the ability to relate sounds to symbols (i.e., to identify the letter “r” sound and/or its letter name to the written “r” and transfer this association to other situations such as a word on a ditto sheet, chalkboard, or book).

Autism - A developmental disability with onset in infancy or early childhood, characterized by severe deficits in social responsiveness and interpersonal relationships, abnormal speech and language development, and repetitive or stereotyped behaviours.

Closure - Mental process whereby one perceives an incomplete from as though it were complete.

Cognition - Process of knowing, perceiving, or reasoning

Directionality - The projection of laterality (which developed within oneself) to outside oneself.

Glossary

Discrimination - The ability to detect differences and likenesses between and among stimuli.

Distractibility - The inability to "tune out" extraneous stimuli, poor attention span, and/or intermittent concentration.

Dyscalculia - Difficulty coping with mathematics; difficulty comprehending as well as understanding relationships between mathematical symbols and concepts; and difficulty with calculations and number manipulation.

Dyseidesia (visual) - A deficit in the ability to recognize whole words by sight.

Dysgraphia - Difficulty writing. This can be the actual physical (motor) process required for writing or the difficulty of being able to express ideas in writing, or of the symbols required for writing (mathematical as well as letter symbols).

Dyslexia - A severe difficulty in understanding or using one or more areas of language, including listening, speaking, reading, writing, and spelling.

Dysnemkinesia (motor) - A deficit in remembering the movements needed for writing.

Dysnomia - A marked difficulty in remembering names or recalling words needed for oral or written language.

Dysphasia - Difficulty comprehending the spoken word (receptive) and/or speaking (expressive).

Dysphonesia (auditory) - A deficit in the ability to sound off, to syllabicate, to pronounce and to distinguish sounds of unfamiliar words

Dyspraxia - A severe difficulty in performing or sequencing movements necessary for speech, drawing, writing, and other tasks requiring fine motor skill.

Eidetic problems - Difficulty with integrations of visual and auditory gestalts for whole words.

Executive functioning - Neuropsychological functions including, but perhaps not limited to, decision making, planning, initiative, assigning priority, sequencing, motor control, emotional regulation, inhibition, problem solving, planning, impulse control, establishing goals, monitoring results of action, self-correcting.

Eye-hand Coordination - The integration of visual and tactile systems which enables the hand to be used as a tool of the visual processes.

Figure-Ground Perception - The ability to select an object or form from the total field of incoming stimuli; the figure is the centre of attention; the ground is the balance of the mass of stimuli.

Glossary

Fine Motor Skills - The use of small muscle groups for specific tasks such as handwriting.

Finger Agnosia - The inability to recognize and interpret sensory impressions with fingers (generally the finger tips), caused by an impairment in the brain.

Gestalt Perception - Deriving meaning from the "whole picture," without breaking it down into parts; "putting it all together"' a holistic view.

Gross Motor Activities - Movement in which groups of large muscles are employed and rhythm and balance are of major importance.

Hyperlexia - A syndrome which interferes with speech, language, and social interaction. It may be accompanied by unusual or "different" behaviours. Children exhibit an intense fascination with letters, numbers, patterns, logos, etc., and a very precocious ability to read, spell, write and/or compute from as early as 18 months to before the age of five.

Kinesthetic - Pertaining to the muscles - doing, talking (the muscles of speech) and writing (the muscles of the hand and arm) as well as general body movement.

Laterality - The internal awareness an individual has of the two sides of his body.

Learning Disabilities (LD) - any form of physical or mental disability that delays development or acquisition of knowledge

Learning Style - The modality(s) through which learning best occurs - visual, auditory, and tactile-kinesthetic channels or pathways (the eyes, the ears, and/or the act of doing).

Long-term Memory - Memories that last for long periods - weeks, months, or longer.

Memory - The ability to store and retrieve, upon demand, information previously obtained through experienced sensations and perceptions; recall.

Memory, Auditory - The ability to remember information received through the auditory channel.

Memory, Sequential - he ability to remember, in order, information which has been received through a sensory channel.

Memory, Visual - The ability to remember and recall information received through the visual channel (the eyes). This also includes memory of meaning.

Memory, Visual-Motor - The capacity to reproduce, in motor form, previous visual experiences.

Glossary

Metacognitive Learning - Instructional approaches emphasizing awareness of the cognitive processes that facilitate one's own learning and its application to academic and work assignments. Typical metacognitive techniques include systematic rehearsal of steps or conscious selection among strategies for completing a task.

Modality - A sensory mode used by an individual to process information (i.e. auditory, visual, tactile, kinesthetic).

Motor - Doing which involves the use of muscle.

Multisensory Learning - An instructional approach that combines auditory, visual, kinaesthetic and tactile elements into a learning task. Tracing sandpaper numbers while saying a number fact aloud would be a multisensory learning activity.

Neurology - Branch of medical science that deals with the nervous system and its disorders.

Neuropsychological Examination - A series of tasks that allow observation of performance that is presumed to be related to the intactness of brain function.

Nonverbal Learning Disabilities/Disorders (NLD or NVLD) - Named for the affected individual's impairment in the area of nonverbal communication, NLD is a neurologically-based condition believed to result from damage to white matter fibers (predominant in the right hemisphere), resulting in a particular pattern of strengths and weaknesses in cognitive, emotional, social and motor skills.

Perception - Direct acquaintance with anything received through the senses.

Perceptual Motor Disability - A condition in which the child has trouble using a utensil and copying notes from the board. Handwriting is sloppy, the letters are improperly formed, not on the line much, and/or inconsistent pencil pressure is evident.

Perceptual Handicap - Difficulty in accurately processing, organizing, and discriminating among visual, auditory, or tactile information. A person with a perceptual handicap may say that "cap/cup" sound the same or that "b" and "d" look the same. However, glasses or hearing aids do not necessarily indicate a perceptual handicap.

Perseveration - The tendency to or process of continuing an activity long beyond the time for which it makes any sense to do so.

Phonetic problems - Difficulty with grapheme-phoneme and syllable integration

Pragmatics - The relation between signs or linguistic expressions and their users.

Glossary

Prereferral Process - A procedure in which special and regular teachers develop trial strategies to help a student showing difficulty in learning remain in the regular classroom.

Prosody - Tone, accent, modulation and all other features that characterize speech.

Resource Program - A program model in which a student with LD is in a regular classroom for most of each day, but also receives regularly scheduled individual services in a specialized LD resource classroom.

Reversal - Perceptual inaccuracy caused by a right to left confusion of letters and words.

Self-Advocacy - The development of specific skills and understandings that enable children and adults to explain their specific learning disabilities to others and cope positively with the attitudes of peers, parents, teachers, and employers.

Semantics - The study of meanings in language - connotative meaning.

Sensory Integration - The brain's ability to take in and synthesize multi-modality experiences perceived by the senses (vision, hearing, smell, taste, touch, motion, and temperature).

Short-term Memory - The initial storage of memories that lasts for fifteen minutes or so. Short-term memories are labile and easily disrupted.

Social Perceptual Disability - The child is not adept at using non-verbal cues in a social setting.

Spatial Orientation - Refers to an awareness of self in space; this includes direction, position, distance, and the judging thereof.

Specific Learning Disability - The term means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations.

Speech-Language Therapy - Treatment of speech and language disorders, not limited to articulation problems, and including pragmatic language.

Subtype Research - A recently developed research method that seeks to identify characteristics that are common to specific groups within the larger population of individuals identified as having learning disabilities.

Tactile - Referring to the sense of touch.

Tactile-kinesthetic - Relating to the sense of touch and the feeling of movement; touching and doing.

Glossary

Time Orientation - The ability to judge time lapses and be aware of the concept of time.

Visual Acuity - Refers to the sharpness of vision.

Visual Association - The ability to relate materials presented visually (words, maps, charts) in a meaningful way.

Visual-Auditory Association - The ability when learning to switch from the visual channel to the auditory channel.

Visual Discrimination - Ability to distinguish (to discriminate) between similar letters, sizes, shapes, numbers, positions, colour, horizontal and vertical, brightness, etc. The ability to recognize similarities and differences.

Visual Figure-Ground - The ability to concentrate on the task at hand despite the presence of other visual stimuli which takes place simultaneously in the same environment.

Visual-motor integration - The coordination of visual information with motor processes.

Visual-perception - How an individual interprets the things he/she sees.

Visualization - The ability to picture, relate, and manipulate visions within one's mind.

Visuospatial - Of the field of vision, especially as it involves the relationships of space and configuration of the object seen.

Vocalization - Movement of lips, tongue, or vocal cords during silent reading.

Working Memory - A memory maintained for a short time to enable a specific task to be accomplished. An example is remembering a phone number until it is dialed.

Wernicke's Area - An area in the left temporal lobe concerned with the comprehension of language and reading and writing.

Some of the above definitions are taken from -
Eric Clearinghouse on Handicapped and Gifted Children, Reston, VA ERIC Digest #E517
http - //www.gatfl.org/ldguide/terms.htm access February 2003
http - //www.behavenet.com/ access February 2003
http - //www.nldontheweb.org/dictionary.htm access February 2003

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Lyon, G. Reid, PH.D.Chief,
Child Development and Behavior Branch, National Institute of Child Health and Human Development, Executive Bldg. Room 4B05, 6100 Executive Blvd. MSC 7510, Bethesda, Maryland 20892, Telephone: 301-496-9849 Fax: 301-480-7773 http://www.readbygrade3.com/lyon.htm

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Zaner-Blozer Company, The Writing Frame, 612 N. Park Street, Columbus, Ohio, USA, 43215.

Request for Accommodations

Name of Student: ----------

Grade: ----------

Teacher: ----------

I have difficulty with:

- ❍ Reading
- ❍ Writing
- ❍ Spelling
- ❍ Speaking
- ❍ Handwriting
- ❍ Light sensitivity

I have characteristics of dyslexia:

- ❍ Yes
  - ❍ Dysnemkinesia (Motor)
  - ❍ Dyseidesia (Visual)
  - ❍ Dysphonesia (Auditory)
- ❍ No

Comments: ----------

The following accommodations help me learn:

- ❍ Reading Machine
- ❍ Computer
- ❍ Scribe/Notetaker
- ❍ Tutor
- ❍ Tape recording of lectures
- ❍ Access to the lecturer's typewritten notes

Enlarged print

- ❍ 12 point
- ❍ 13 point
- ❍ 14 point

Copies provided on coloured paper

- ❍ Buff
- ❍ Blue
- ❍ Other

Exams and test format:

- ❍ Multiple choice questions
- ❍ Matching correct responses
- ❍ Oral presentation
- ❍ Take home essays

This information should be attached to all scripts of

Student Number ……

This student is dyslexic. Problems with writing become acute when writing under time pressure. The most common indicators, in addition to poor general organization of essays, are poor sentence structure and syntax, inappropriate use of tense, of singular and plural, and of punctuation and capital letters. The student may use inappropriate words or, in the case of unstressed words such as prepositions and conjunctions, may miss them out altogether. All of these factors, and spelling errors may increase with each page of writing as fatigues sets in and can make the student's work appear disjointed, immature or careless.
The dyslexic student is not aware of these errors.

Form Code No. _____

Education Service Center
For Information:
Division of Instruction: 972-348-1010
www.ednet10.net

Dyslexia in Texas

International Dyslexia Association Conference
November 16, 2002

State Dyslexia Consultant:

Helen Macik

972-348-1410 (fax) 972-348-1411
macikh@esc10.ednet10.net

THE DYSLEXIA HANDBOOK

PROCEDURES CONCERNING DYSLEXIA AND RELATED DISORDERS

Refer to Publication Number GE01 210 01

TEXAS EDUCATION AGENCY
AUSTIN, TEXAS
February 2001

Excerpts from The Dyslexia Handbook. The complete version is available at www.ednet10.net/dyslexia.pdf

TABLE OF CONTENTS

PREFACE

Students who continue to struggle to read, despite conventional or intensified instruction, are provided organized systems of reading support in the state of Texas. Some students struggle during early reading acquisition. Others do not struggle until the later grades when they face more complex language demands (e.g., reading textbooks; grammar). Some may be non-English speakers who struggle to read in their native language and or English language learners (ELL) who struggle to read despite having appropriately developed oral English language. Many of the struggling readers struggle because of dyslexia. This includes students in all grades, non-English speakers, and ELL.

The purpose of this handbook of procedures related to dyslexia is to provide guidelines for school districts, charter schools, campuses, teachers, and parents in the identification and instruction of students with dyslexia. This handbook will be helpful to districts and charter schools as they develop their written procedures regarding students with dyslexia. While state and federal laws provide a legal framework, districts and charter schools should also address the individual needs of the students that they serve.

In Texas the identification and instruction of students with dyslexia and related disorders is mandated and structured by two statutes and one rule. Texas Education Code (TEC) §38.003 defines dyslexia and related disorders, mandates testing students for dyslexia and providing instruction for students with dyslexia, and gives the State Board of Education authority to adopt rules and standards to administer testing and instruction. Chapter 19 of the Texas Administrative Code (TAC) §74.28 outlines the responsibilities of districts and charter schools in the delivery of services to students with dyslexia. Finally, §504 of the Rehabilitation Act of 1973 establishes assessment and evaluation standards and procedures for students. Section 504 procedures are implemented when it is determined that dyslexia substantially limits learning.

In addition to the statutes and rule related to dyslexia, the State Board of Education approved (1992) and revised (1998) a set of guidelines referred to as the *Revised Procedures Concerning Dyslexia and Related Disorders*. The present handbook, *The Dyslexia Handbook: Procedures Concerning Dyslexia and Related Disorders*, replaces all previous handbooks and guidelines. The handbook does not introduce legal changes or changes in procedures. Rather, it clarifies language related to assessment and identification of students with dyslexia and reorganizes the procedures. Wherever possible, the procedures are bulleted and arranged in a sequence for districts and charter schools to follow as they develop their written procedures.

The chapters in this handbook include:

I. Definition and Characteristics of Dyslexia

II. Issues Related to the Kindergarten, Grade 1, and Grade 2 Reading Instruments

III. Procedures and Measures for Assessing Students for Dyslexia

IV. Identification of Students with Dyslexia

V. Instruction for Students with Dyslexia

VI. Professional Development of the Teacher of Students with Dyslexia

VII. Referral to Special Education

The dyslexia handbook has ten appendices: a flow chart of procedures; testing accommodations for the Texas Assessment of Academic Skills (TAAS); a glossary of terms; questions and answers; contacts for further information and organizations; publications related to dyslexia; the Rehabilitation Act of 1973, §504; TEC §38.003; TEC §28.006; and 19 TAC §74.28.

I. Definitions and Characteristics of Dyslexia

The student who struggles with reading, writing, and/or spelling often puzzles teachers and parents. The student displays adequate intelligence and receives the same classroom instruction that benefits most children. Still the student struggles with some or all of the many facets of reading, writing and/or spelling. This student may be identified as a student with dyslexia. As defined in TEC §38.003:

(1)"*Dyslexia*" means a disorder of constitutional origin manifested by a difficulty in learning to read, write, or spell, despite conventional instruction, adequate intelligence, and sociocultural opportunity.
(2)"*Related disorders*" includes disorders similar to or related to dyslexia such as developmental auditory imperception, dysphasia, specific developmental dyslexia, developmental dysgraphia, and developmental spelling disability.
The working definition of the International Dyslexia Association states:

> *Dyslexia is one of several distinct learning disabilities. It is a specific language-based disorder of constitutional origin characterized by difficulties in single-word decoding, usually reflecting insufficient phonological processing. These difficulties in single-word decoding are often unexpected in relation to age and other cognitive and academic abilities; they are not the result of generalized developmental disability or sensory impairment. Dyslexia is manifested by variable difficulty with different forms of language, often including, in addition to problems with reading, a conspicuous problem with acquiring proficiency in writing and spelling* (International Dyslexia Association Research Committee in collaboration with the National Center for Learning Disabilities and the National Institutes of Child Health and Human Development, April 1994).

The difficulties of a student identified as having dyslexia occur in phonemic awareness and manipulation, single-word decoding, reading fluency, reading comprehension, spelling, and/or written composition. These difficulties are unexpected for the student's age, educational level, or cognitive abilities. Additionally, there is often a **family history** of similar difficulties.

The following are the reading/writing/spelling characteristics of dyslexia:

- Difficulty reading single words in isolation;
- Difficulty accurately decoding nonsense or unfamiliar words;
- Slow, inaccurate, or labored oral reading; (lack of reading fluency); and/or
- Difficulty with learning to spell.

The reading/writing/spelling characteristics are the result of:

- Difficulty with the development of phonological awareness, including segmenting, blending, and manipulating sounds in words;
- Difficulty learning the names of letters and their associated sounds;
- Difficulty with phonological memory (holding information about sounds and words in memory); and/or
- Difficulty with rapid naming of familiar objects, colors, or letters of the alphabet.

The reading/writing/spelling characteristics of dyslexia lead to:

- Variable degrees of difficulty with word recognition in isolation or in context;
- Variable difficulty with aspects of reading comprehension;
- Variable difficulty with aspects of written composition; and/or
- A limited amount of time spent in reading activities.

II. ISSUES RELATED TO KINDERGARTEN, GRADE 1, AND GRADE 2 READING INSTRUMENTS

Some students demonstrate difficulties during early reading instruction. Two forms of assistance are available for these students. The first is through TEC §28.006. The second is through a recommendation for assessment for dyslexia. The two sources of instructional help are not sequential and must be determined solely by the student's reading needs.

The most common source of instructional help for early struggling readers is through TEC §28.006. Districts and charter schools must administer early reading instruments to all students in Kindergarten and grades 1 and 2 to diagnose their reading development and comprehension. (For students in special education, see TEC §28.006(g).) If, on the basis of the reading instrument results, students are determined to be at risk for dyslexia or other reading difficulties, the district or charter school must notify the students' parents/guardians. The district or charter school must also implement an accelerated (intensive) reading program that appropriately addresses students' reading difficulties (TEC §28.006(g)) and enables them to "catch up" with their typically performing peers.

During Kindergarten and grades 1 and 2 some students will demonstrate the characteristics of dyslexia or may struggle with reading, writing, and spelling during the intensive reading instruction provided through TEC §28.006. Districts and charter schools must initiate procedures to recommend these students for assessment for dyslexia. The information from the early reading instruments will be one source of information in deciding whether or not to recommend a student for assessment for dyslexia. The early reading instruments may or may not be part of the measures used to assess a student for dyslexia and must not be the only measures used to assess a student for dyslexia.

III. Procedures and Measures for Assessing Students for Dyslexia

Districts and charter schools must establish written procedures for recommending and assessing students for dyslexia within general education. While districts and charter schools must follow federal and state guidelines, they must also develop procedures that address the needs of their students. The procedures begin for students when they continue to struggle with one or more components of reading.

At any time that a student continues to struggle with one or more components of reading, districts and charter schools must collect additional information about the student. Districts and charter schools will use this information to evaluate the student's academic progress and determine what actions are needed to ensure the student's improved academic performance. Some of the information that the district or charter school collects is in the student's cumulative folder; other information is available from teachers and parents. Information to be considered includes the results from some or all of the following:

- Vision screening (school may conduct screening);
- Hearing screening (school may conduct screening);
- Teacher reports of classroom concerns;
- Basal reading series assessment;
- Accommodations and modifications provided by classroom teachers;
- Academic progress reports (report cards);
- Samples of school work;
- Parent conferences;
- Testing for limited English proficiency;
- Speech and language screening through a referral process;
- The K-2 reading instrument as described in TEC §28.006; and/or
- State student assessment program as described in TEC §39.022.

Among the actions that the district or charter school has available for the student is a recommendation that the student be assessed for dyslexia. The district or school recommends assessment for dyslexia if the student demonstrates the following:

- Poor performance in one or more areas of reading and/or the related areas of writing and spelling that is unexpected for the student's age/grade, and;
- Some or all of the characteristics of dyslexia.

When the district or charter school recommends that a student be assessed for dyslexia, the district proceeds using the following procedures.

Procedures

Students enrolling in public schools in Texas shall be assessed for dyslexia and related disorders at appropriate times (TEC §38.003 (a)). The appropriate time depends upon multiple factors including the student's reading performance, reading difficulties, poor response to additional reading instruction (if placed in additional reading instruction), teachers' input, and parents' input. Additionally, the appropriate time for assessing is early in a student's school career (19

TAC §74.28)**,** the earlier the better. While earlier is better, students should be recommended for assessment for dyslexia even if the reading difficulties appear later in a student's school career.

The procedures to follow include:

- Notify parents or guardians of proposal to assess student for dyslexia (§504);
- Inform parents or guardians of their rights under §504;
- Obtain parent permission to assess the student for dyslexia; and
- Administer measures only by individuals/professionals who are trained in assessments to evaluate students for dyslexia and related disorders (19 TAC §74.28).

Tests, assessments, and other evaluation materials must:

- Be validated for the specific purpose for which they are used (§504);
- Include material tailored to assess specific areas of educational need and not merely materials that are designed to provide a single general intelligence quotient (§504);
- Be selected and administered so as to ensure that, when a test is given to a student with impaired sensory, manual, or speaking skills, the test results accurately reflect the student's aptitude or achievement level, or whatever other factor the test purports to measure, rather than reflecting the student's impaired sensory, manual, or speaking skills (§504);
- Include multiple measures of a student's reading abilities such as informal assessment information (e.g., anecdotal records, lists of books the student has read, audio recordings of the student's oral reading) (§504); and
- Be administered by trained personnel and in conformance with the instructions provided by the producer of the evaluation materials (§504).

Domains to Assess

The district or charter school administers measures that are related to the student's educational needs. Depending upon the student's age and stage of reading development, the following are the areas related to reading that should be assessed.

- Reading single words in isolation;
- Word decoding (real and nonwords);
- Phonological awareness;
- Letter knowledge (name and associated sound);
- Rapid naming;
- Fluency/rate and accuracy;
- Reading comprehension; and/or
- Spelling.

Based on the student's academic difficulties and characteristics, additional areas that can be assessed include vocabulary, written expression, handwriting, and mathematics. For non-English speakers who struggle to read in their native language, similar measures in the student's native language would be used as appropriate. This may require that dyslexia personnel work with the bilingual staff to administer the measures and determine if student performance is lower than what would be expected for the student's age/grade.

IV. IDENTIFICATION OF STUDENTS WITH DYSLEXIA

A team or committee of knowledgeable persons determines if the student has dyslexia. The team must be knowledgeable about:

- The student being assessed;
- The reading process;
- Dyslexia and related disorders;
- Dyslexia instruction;
- District or charter school, state, and federal guidelines for assessment;
- The assessments used; and
- The meaning of the collected data.

A committee of knowledgeable persons determines the identification of dyslexia after reviewing all accumulated data including the following areas:

- The observations of the teacher, district or charter school staff, and/or parent;
- Data gathered from the classroom (including student work and the results of classroom measures) and information found in the student's cumulative folder (including the developmental and academic history of the student);
- The results of administered assessments; and
- All other accumulated data regarding the development of the student's learning and his/her educational needs.

The student's reading difficulties and characteristics of dyslexia will be reflected or supported by low performance for the student's age and educational level in some or all of the following areas:

- Reading single words in isolation;
- Word decoding (real and nonwords);
- Phonological awareness;
- Letter knowledge (name and associated sound);
- Rapid naming;
- Fluency/rate and accuracy;
- Reading comprehension; and
- Spelling.

A committee of knowledgeable persons must also incorporate the following guidelines from TEC §38.003 and 19 TAC §74.28:

- The student's unexpected lack of appropriate academic progress;
- The student's exhibiting characteristics associated with dyslexia;
- The student's having adequate intelligence, the ability to learn;
- The student's receiving conventional instruction; and
- The student's lack of progress not being due to sociocultural factors such as language differences, irregular attendance, and lack of experiential background.

Based on the above information and guidelines the committee of knowledgeable persons determines whether the student has dyslexia. If the student has dyslexia, the committee of knowledgeable persons also determines whether the student has a disability under the Rehabilitation Act of 1973, §504. (Not all students with dyslexia are necessarily eligible for §504.) A student is considered to have a disability under

§504 if the condition substantially limits the student's learning. Students with additional factors that complicate their dyslexia may require additional support or referral to special education.

V. INSTRUCTION FOR STUDENTS WITH DYSLEXIA

Once it has been determined that a student has dyslexia, the school district or charter school shall provide an appropriate instructional program for the student. As stated in TEC §38.003:

> "*In accordance with the program approved by the State Board of Education, the board of trustees of each school district shall provide for the treatment of any student determined to have dyslexia or a related disorder*."

The following procedures must be followed:

- Instructional decisions for a student with dyslexia are made by a team that is knowledgeable about the student, the meaning of the evaluation information, and instructional components and approaches for students with dyslexia.
- School districts and charter schools may purchase a reading program or develop their own reading program for students with dyslexia and related disorders as long as the program is characterized by the descriptors found in this handbook. The descriptors include the components phonemic awareness, graphophonemic knowledge, language structure, linguistic patterns, and processes (19 TAC §74.28). Instructional approaches include explicit, individualized, and multi-sensory instruction (19 TAC §74.28). The components of instruction and instructional approaches are described in the next section of this handbook.
- Each school must provide each identified student access at his or her campus to the services of a teacher trained in dyslexia and related disorders. The school district may, with the approval of each student's parents or guardians, offer additional services at a centralized location. Such centralized services shall not preclude each student from receiving services at his or her campus (19 TAC §74.28).
- Parents/guardians of students eligible under the Rehabilitation Act of 1973, §504, must be informed of all services and options available to the student under that federal statute.
- Teachers who provide the appropriate instruction for students with dyslexia must be trained in instructional strategies that utilize individualized, intensive, multisensory, phonetic methods and a variety of writing and spelling components specified in the next section of this handbook (19 TAC §74.28).
- Teachers who provide the appropriate instruction for students with dyslexia must be trained in the professional development activities specified by each district, charter school, and/or campus planning and decision making committee (19 TAC §74.28).

Districts and charter schools may provide a parent education program for the parents/guardians of students with dyslexia and related disorders. The program should include:

- Characteristics of dyslexia and related disorders;
- Information on assessment and diagnosis of dyslexia;
- Information on effective strategies for teaching dyslexia; and
- Awareness of information on classroom modifications and especially of modifications allowed on standardized testing (19 TAC §74.28).

Components of Instruction

The instructional program should be offered in a small class setting and include reading writing, and spelling as appropriate. The major instructional strategies should utilize individualized, intensive, and multisensory methods as appropriate.

Components of instruction, as appropriate for the reading needs of the student, include:

- Phonemic awareness instruction that enables students to detect, segment, blend, and manipulate sounds in spoken language;

- Graphophonemic knowledge (phonics) instruction that takes advantage of the letter-sound plan in which words that carry meaning are made of sounds and sounds are written with letters in the right order. Students with this understanding can blend sounds associated with letters into words and can separate words into component sounds for spelling and writing;

- Language structure instruction that encompasses morphology (the study of meaningful units of language such as prefixes, suffixes, and roots), semantics (ways that language conveys meaning), syntax (sentence structure), and pragmatics (how to use language in a particular context);

- Linguistic instruction directed toward proficiency and fluency with the patterns of language so that words and sentences are the carriers of meaning; and

- Process-oriented instruction in the processes or strategies students use for decoding, encoding, word recognition, fluency, and comprehension that students need to become independent readers.

Instructional approaches, as appropriate to meet the instructional needs of the student, include:

- Explicit, direct instruction that is systematic (structured), sequential, and cumulative. Instruction is organized and presented in a way that follows a logical sequential plan, fits the nature of language (alphabetic principle) with no assumption of prior skills or language knowledge, and maximizes student engagement. This instruction proceeds at a rate commensurate with students' needs, ability levels, and demonstration of progress;

- Individualized instruction that meets the specific learning needs of each individual student in a small group setting; a reading curriculum that matches each student's individual ability level and contains all of the Components of Instruction mandated in 19 TAC §74.28;

- Intensive, highly concentrated instruction that maximizes student engagement, uses specialized methods and materials, produces results, and contains all the Components of Instruction mandated in 19 TAC §74.28;

- Meaning-based instruction that is directed toward purposeful reading and writing, with an emphasis on comprehension and composition; and

- Multisensory instruction that incorporates the simultaneous use of two or more sensory pathways (auditory, visual, kinesthetic, tactile) during teacher presentations and student practice.

Teachers of students with dyslexia shall be prepared to utilize these techniques and strategies. They may also serve as trainers and consultants in the area of dyslexia and related disorders to regular, remedial, and special education teachers.

VI. PROFESSIONAL DEVELOPMENT OF THE TEACHER OF STUDENTS WITH DYSLEXIA

As stated in 19 TAC, §74.28, the teachers who provide appropriate instruction for students with dyslexia must be trained and be prepared to implement instructional strategies that utilize individualized, intensive, multisensory, phonetic methods and a variety of writing and spelling components. These teachers must also be trained in the professional development activities specified by each district, charter school, and/or campus planning and decision making committee.

Teachers trained in the appropriate instruction for dyslexia may serve as consultants in the area of dyslexia and related disorders to regular, remedial, and special educators.

VII. REFERRAL TO SPECIAL EDUCATION

At any time during the assessment for dyslexia, identification process, or instruction related to dyslexia, students may be referred for evaluation for special education. At times, students will display additional factors/areas complicating their dyslexia and requiring more support than what is available through dyslexia instruction. At other times, there will be students with severe dyslexia or related disorders who will be unable to make adequate academic progress within any of the programs described in the procedures related to dyslexia. In such cases, a referral to special education for evaluation and possible identification as disabled within the meaning of the Individuals with Disabilities Education Act (IDEA) (20 U.S.C. section 1400 et seq.) should be made as needed.

If the student with dyslexia is found eligible for special education, the admission, review, and dismissal (ARD) committee must include appropriate reading instruction on the student's individualized education program (IEP). Appropriate reading instruction includes the descriptors listed in the chapter on Instruction for Students with Dyslexia.

If a student with dyslexia is referred for special education, districts and charter schools follow IDEA, 1997. In IDEA, 1997, §1401 (26), dyslexia is considered one of a variety of etiological foundations for "specific learning disability." In general, the term "specific learning disability" means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written. The disorder may manifest itself in imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. A disorder includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. A disorder does not include a learning problem that is primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage.

34 CFR 300.7(c)(10) states that a "specific learning disability" means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual disability, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not apply to children who have learning problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage.

Appendix H: Texas Education Code §38.003 (State Law)

§ 38.003. Screening and Treatment for Dyslexia and Related Disorders

(a) Students enrolling in public schools in this state shall be tested for dyslexia and related disorders at appropriate times in accordance with a program approved by the State Board of Education.

(b) In accordance with the program approved by the State Board of Education, the board of trustees of each school district shall provide for the treatment of any student determined to have dyslexia or a related disorder.

(c) The State Board of Education shall adopt any rules and standards necessary to administer this section.

(d) In this section:

(1) "Dyslexia" means a disorder of constitutional origin manifested by a difficulty in learning to read, write, or spell, despite conventional instruction, adequate intelligence, and sociocultural opportunity.

(2) "Related disorders" includes disorders similar to or related to dyslexia, such as developmental auditory imperception, dysphasia, specific developmental dyslexia, developmental dysgraphia, and developmental spelling disability.

Added by Acts 1995, 74th Leg., ch. 260, § 1, eff. May 30, 1995.

Appendix I: Texas Education Code §28.006 (State Law)

§ 28.006. Reading Diagnosis

(a) The commissioner shall develop recommendations for school districts for:

(1) administering reading instruments to diagnose student reading development and comprehension;

(2) training educators in administering the reading instruments; and

(3) applying the results of the reading instruments to the instructional program.

(b) The commissioner shall adopt a list of reading instruments that a school district may use to diagnose student reading development and comprehension. A district-level committee established under Subchapter F, Chapter 11, may adopt a list of reading instruments for use in the district in addition to the reading instruments on the commissioner's list. Each reading instrument adopted by the commissioner or a district-level committee must be based on scientific research concerning reading skills development and reading comprehension. A list of reading instruments adopted under this subsection must provide for diagnosing the reading development and comprehension of students participating in a program under Subchapter B, Chapter 29.

(c) Each school district shall administer, at the kindergarten and first and second grade levels, a reading instrument on the list adopted by the commissioner or by the district-level committee. The district shall administer the reading instrument in accordance with the commissioner's recommendations under Subsection (a)(1).

(d) The superintendent of each school district shall:

(1) report to the commissioner and the board of trustees of the district the results of the reading instruments; and

(2) report, in writing, to a student's parent or guardian the student's results on the reading instrument.

(e) The results of reading instruments administered under this section may not be used for purposes of appraisals and incentives under Chapter 21 or accountability under Chapter 39.

(f) This section may be implemented only if funds are appropriated for administering the reading instruments. Funds, other than local funds, may be used to pay the cost of administering a reading instrument only if the instrument is on the list adopted by the commissioner.

(g) A school district shall notify the parent or guardian of each student in kindergarten or first or second grade who is determined, on the basis of reading instrument results, to be at risk for dyslexia or other reading difficulties. The district shall implement an accelerated reading instruction program that provides reading instruction that addresses reading deficiencies to those students and shall determine the form, content, and timing of that program. The admission, review, and dismissal committee of a student who participates in a district's special education program under Subchapter B, Chapter 29, and who does not perform satisfactorily on a reading instrument under this section shall determine the manner in which the student will participate in an accelerated reading instruction program under this subsection.

(h) The school district shall make a good faith effort to ensure that the notice required under this section is provided either in person or by regular mail and that the notice is clear and easy to understand and is written in English and in the parent or guardian's native language.

(i) The commissioner shall certify, not later than July 1 of each school year or as soon as practicable thereafter, whether sufficient funds have been appropriated statewide for the purposes of this section. A determination by the commissioner is final and may not be appealed. For purposes of certification, the commissioner may not consider Foundation School Program funds.

(j) No more than 15 percent of the funds certified by the commissioner under Subsection (i) may be spent on indirect costs. The commissioner shall evaluate the programs that fail to meet the standard of performance under Section 39.051(b)(7) and may implement sanctions under Subchapter G, Chapter 39. The commissioner may audit the expenditures of funds appropriated for purposes of this section. The use of the funds appropriated for purposes of this section shall be verified as part of the district audit under Section 44.008.

(k) The provisions of this section relating to parental notification of a student's results on the reading instrument and to implementation of an accelerated reading instruction program may be implemented only if the commissioner certifies that funds have been appropriated during a school year for administering the accelerated reading instruction program specified under this section.

Text of subsection (l) effective until January 1, 2002

(l) Each district shall provide the accelerated reading instruction under Subsection (g) to students in:

(1) kindergarten during the 1999–2000 school year;

(2) kindergarten and first grade during the 2000–2001 school year; and

(3) kindergarten and first and second grades beginning with the 2001–2002 school year.

Text of subsection (m) effective until January 1, 2002

(m) Subsection (l) and this subsection expire January 1, 2002.

Added by Acts 1997, 75th Leg., ch. 397, § 2, eff. Sept. 1, 1997. Amended by Acts 1999, 76th Leg., ch. 396, § 2.11, eff. Sept. 1, 1999.

Appendix J: Texas Administrative Code §74.28 (State Board of Education Rule)

§74.28. Students with Dyslexia and Related Disorders.

(a) The board of trustees of a school district must ensure that procedures for identifying a student with dyslexia or a related disorder and for providing appropriate instructional services to the student are implemented in the district. These procedures will be monitored by the Texas Education Agency (TEA) with on-site visits conducted as appropriate.

(b) A school district's procedures must be implemented according to the State Board of Education (SBOE) approved strategies for screening, and techniques for treating, dyslexia and related disorders. The strategies and techniques are described in "Procedures Concerning Dyslexia and Related Disorders," a set of flexible guidelines for local districts that may be modified by SBOE only with broad-based dialogue that includes input from educators and professionals in the field of reading and dyslexia and related disorders from across the state. Screening should only be done by individuals/professionals who are trained to assess students for dyslexia and related disorders.

(c) A school district may purchase a reading program or develop its own reading program for students with dyslexia and related disorders, as long as the program is characterized by the descriptors found in "Procedures Concerning Dyslexia and Related Disorders." Teachers who screen and treat these students must be trained in instructional strategies which utilize individualized, intensive, multisensory, phonetic methods and a variety of writing and spelling components described in the "Procedures Concerning Dyslexia and Related Disorders" and in the professional development activities specified by each district and/or campus planning and decision making committee.

(d) Before an identification or assessment procedure is used selectively with an individual student, the school district must notify the student's parent or guardian or another person standing in parental relation to the student.

(e) Parents/guardians of students eligible under the Rehabilitation Act of 1973, §504, must be informed of all services and options available to the student under that federal statute.

(f) Each school must provide each identified student access at his or her campus to the services of a teacher trained in dyslexia and related disorders. The school district may, with the approval of each student's parents or guardians, offer additional services at a centralized location. Such centralized services shall not preclude each student from receiving services at his or her campus.

(g) Because early intervention is critical, a program for early identification, intervention, and support for students with dyslexia and related disorders must be available in each district as outlined in the "Procedures Concerning Dyslexia and Related Disorders."

(h) Each school district may provide a parent education program for parents/guardians of students with dyslexia and related disorders. This program should include: awareness of characteristics of dyslexia and related disorders; information on testing and diagnosis of dyslexia; information on effective strategies for teaching dyslexic students; and awareness of information on modification, especially modifications allowed on standardized testing.

Source: The provisions of this §74.28 adopted to be effective September 1, 1996, 21 TexReg 4311.