

# **Understanding Dyslexia and Other Specific Learning Disabilities (SPLD)**

**Linda Siegel**

**University of British Columbia**

**Vancouver, CANADA**

**[linda.siegel@ubc.ca](mailto:linda.siegel@ubc.ca)**



# **Social Costs of SPLD**

- 82 % of the street youth in Toronto had undetected and unremediated learning disabilities
- All the adolescent suicides in a 3 year period in Ontario had undetected and unremediated learning disabilities

# **Why Early Identification + Intervention**

- 75%-95% of individuals in prison have significant reading difficulties
- Undiagnosed and unremediated reading problems result in emotional and social difficulties

# **Learning Disabilities and Mental Health**

- Children with learning disabilities are at risk for mental health problems
- Anxiety, depression, oppositional/defiant and conduct disorder may be a result of learning disabilities
- It is important to identify and treat learning disabilities

# Dyslexia

- A significant difficulty with accuracy and/or fluency of reading words and/or nonwords
- There are usually problems with spelling and writing

# Characteristics Of Dyslexia

## DIFFICULTY WITH:

- Recognizing the sounds in speech (tones)
- Knowing the sound of the letters (characters)
- Finding the right word
- Grammar
- Memory

# Characteristics Of Dyslexia

## Strengths

- Music
- Sports
- Art
- Visual-Spatial Skills
- Mechanical Skills







# Guernica

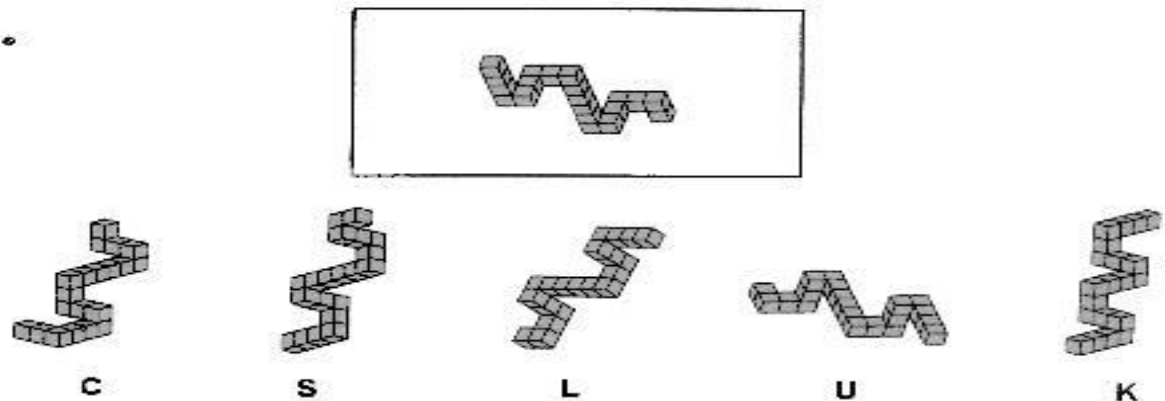
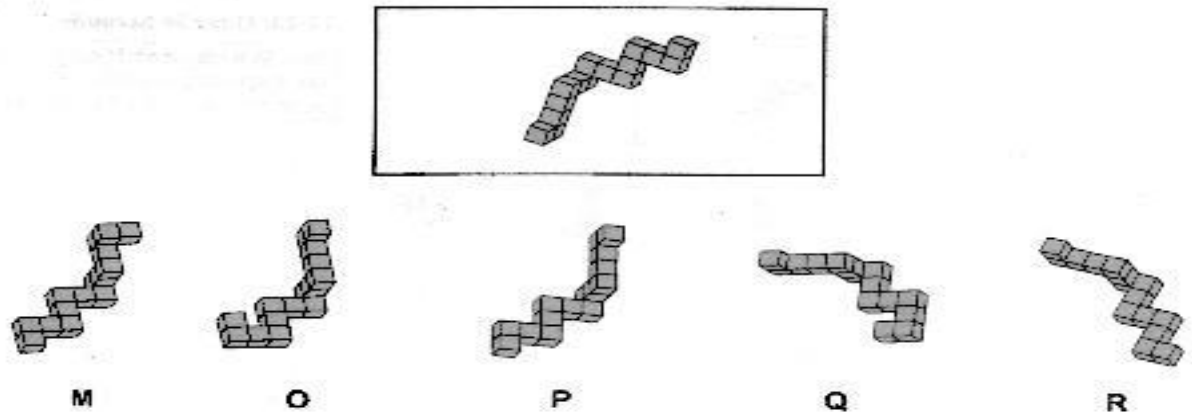


# Pablo Picasso

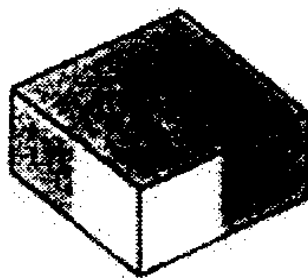
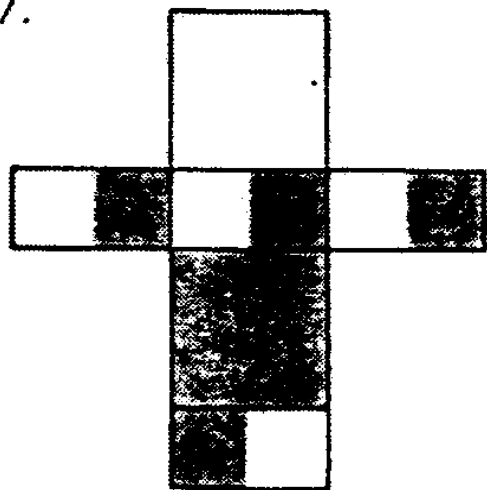
- Learned to read very late
- Spelling and writing problems
- Hated school – played sick, had to be dragged to school
- Punished in school because he was a bad student
- School entrance examination

# Block Rotation

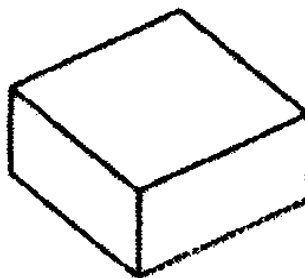
- The student is required to identify which of 2 patterns represent the target that has been rotated in 3D space



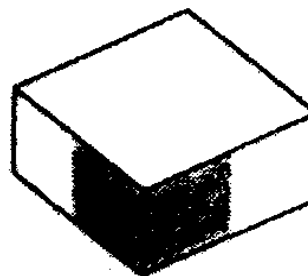
7.



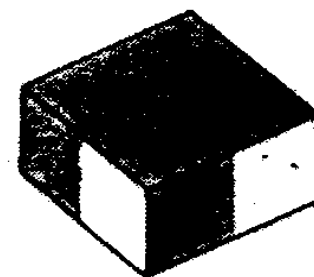
A



B

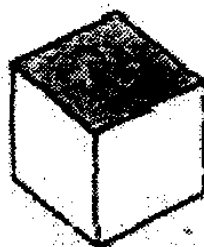
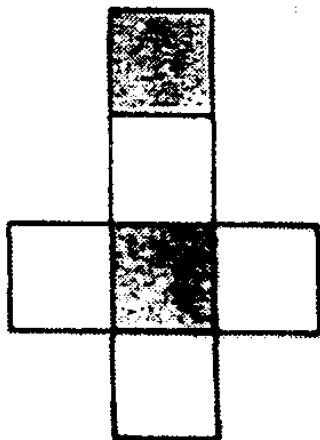


C

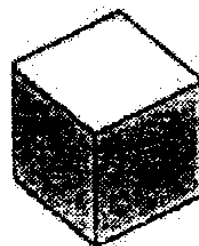


D

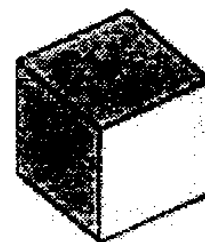
8.



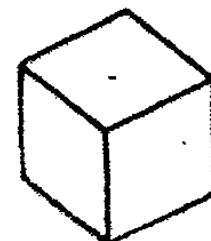
A



B



C



D

# Mathematics Disability (Dyscalculia)

## Challenges

- Computational Arithmetic
- Short term and Working Memory for numbers
- Handwriting
- Spelling - sometimes
- Fine-Motor Coordination
- Learning a foreign language-sometimes

# Winston Churchill

- Hate mathematics and failed math courses
- Had difficulty with foreign languages, Latin French
- Very good verbal skills
- Good reasoning skills



# Characteristics Of A Mathematics Disability

## Strengths

- Verbal Skills
- Ability to make Inferences
- Problem solving
- Logical Reasoning
- Drama
- Humour



# Agatha Christie

- Spelling difficulties
- Poor handwriting
- Difficulty with learning a foreign language

# Writing Disability

- Sloppy handwriting
- Can tell good stories but has trouble writing them down
- Poor fine motor coordination
- Poor working memory for words and numbers
- Problems with spelling
- Poor organization when writing

# The Road Forward

- Streamline identification
- Prevention
  - Early identification
  - Early intervention
- Teacher training
- Make resources available to schools and teachers

# Prevention

- Early identification
- Early intervention
- Evidence based reading and/or mathematics programs

# Screening

- We have the techniques to screen children who are at risk for learning disabilities at age 5
- Screening should be universal
  - Easy to administer
  - Brief

# 3 Tier Model

- 1. Classroom instruction
  - Early screening
- 2. Resource withdrawal
- 3. Intensive help

# Characteristic of the RTI Model

- Excellent, evidence based classroom instruction
- Frequent monitoring of performance
- Help as soon as it is needed
- Intensive assessment only as a last resort

# Streamline Assessment

- Measures of reading, spelling, arithmetic, mathematical problem solving
- Interview to find strengths
- IQ and processing measures are NOT needed

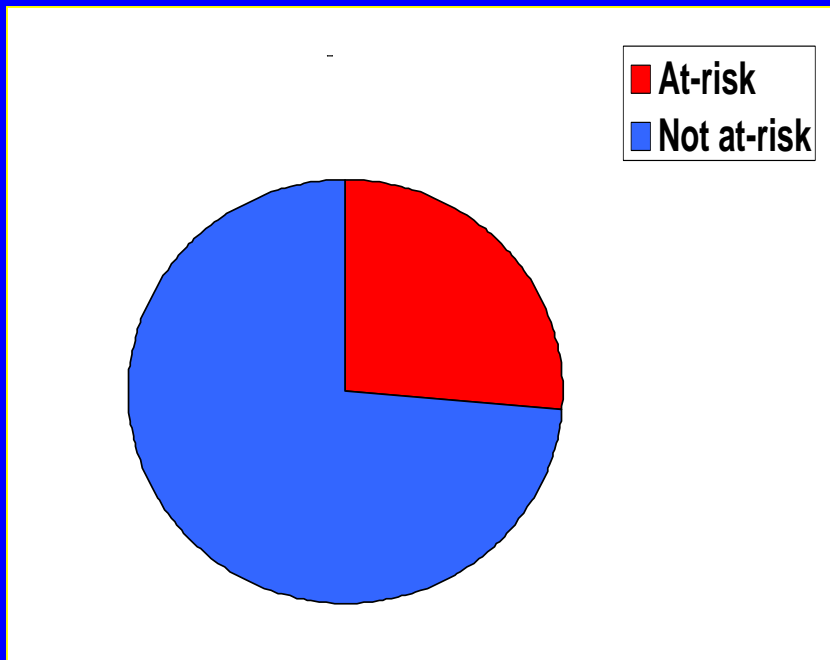


# Early Identification and Intervention

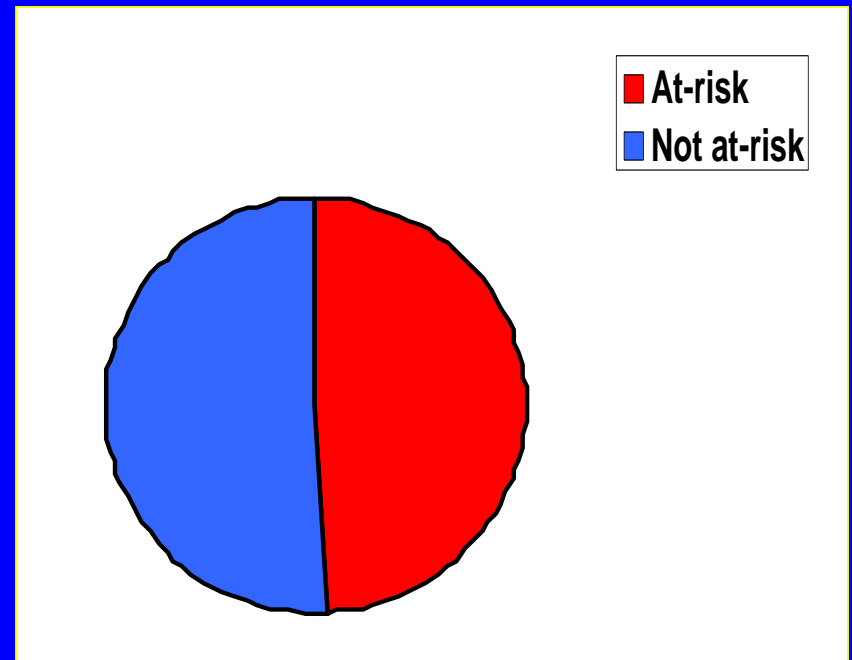
- Brief screening at school entry
- Monitor progress
- Give help as soon as it is needed

# Kindergarten

## L1 English

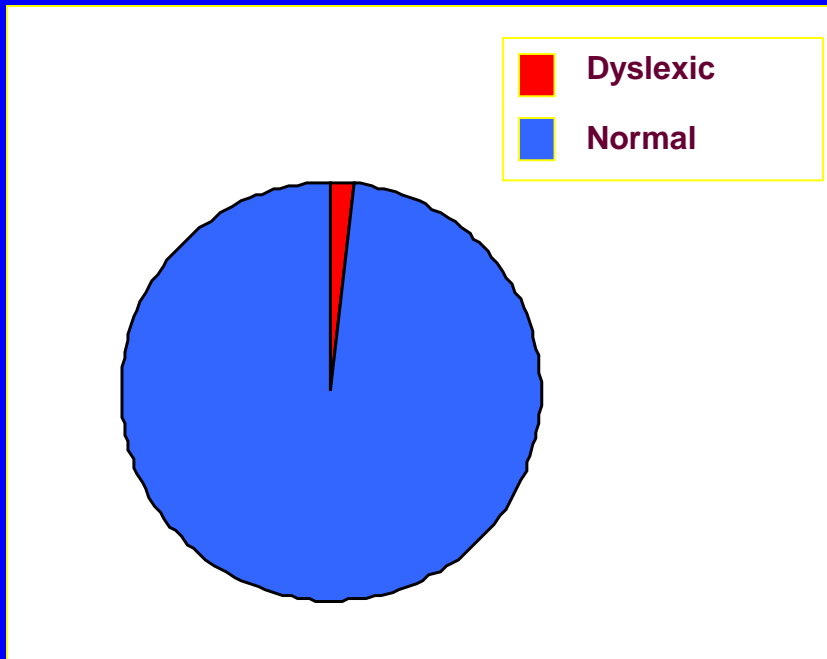


## ELL

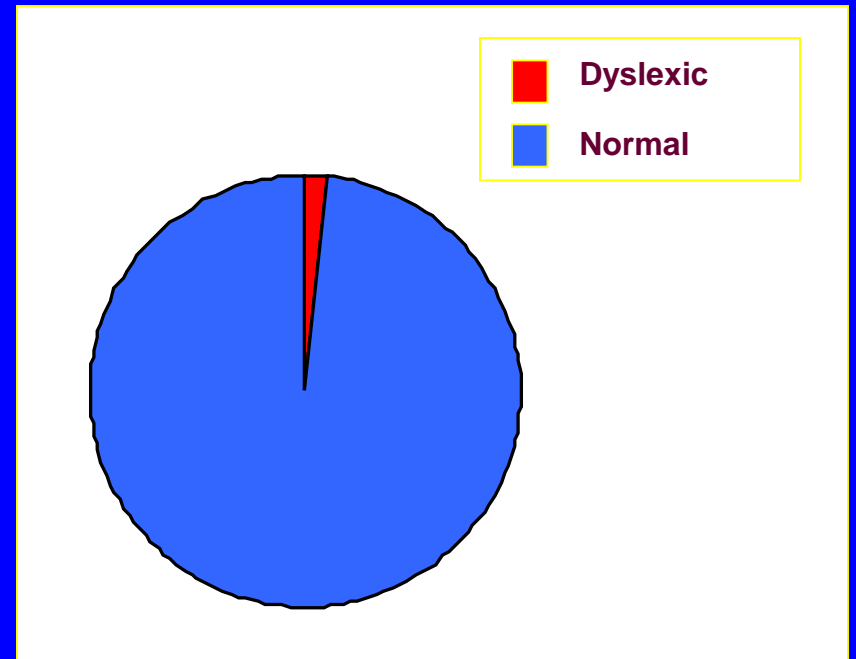


# Grade 7- Age 13 years

## L1 English



## ELL



# Results

- The children in the study improved very significantly after good reading instruction.
- The percentage of dyslexics decreased to a small number.
- The children who were ELL had reading and spelling skills equal to native English speakers

# Screening

- Letter identification – orthographic and print exposure
- Phonological processing
- Syntax

# Provide Resources

- Remediation
- Accommodations
- Building self esteem

# **What is Remediation/Intervention?**

- Remediation and intervention are direct teaching addressed specifically to a problem. The terms have very similar meanings.

# Intervention/Remediation

- Phonological Awareness programs – Firm Foundations
- Multisensory programs, e.g. Wilson system, Orton Gillingham, Lindamood-Bell
- Build self esteem and advocacy skills
- Teach teachers and parents about learning disabilities



# **What are accommodations?**

- Accommodations are changes in the learning environment and usual manner of teaching that help the special education student

# ACCOMMODATIONS

- High interest, low vocabulary books
- Screen reader
- Textbooks & Books on Tape
- Computer
  - Training – Keyboarding, Spelling, Grammar Check, Thesaurus
  - Speech Recognition System
- Find Strengths

# ACCOMMODATIONS

- Tape Recorder for Lectures
- Computer to Take Notes in Class
- Note Taker
- Calculator
- Extended Time for Exams
- Exams in Point Form

# The Individual Educational Plan

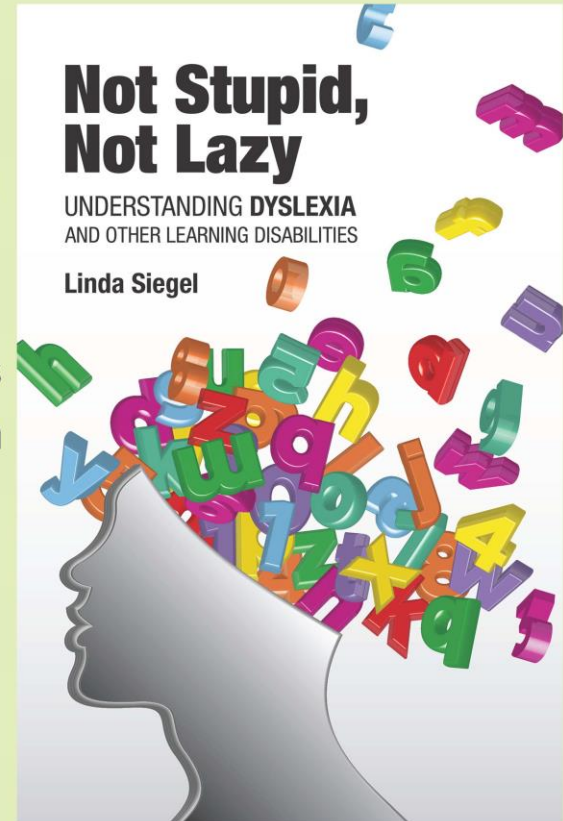
- A description of the students current functioning in all areas, including strengths
- A description of what should be done to help the student with areas of difficulty
- A description of what will be done in the classroom to help the student
- A description of what resource people will help the student and in what areas

# The Individual Program Plan

- A description of the students current functioning in all areas, including strengths
- A description of what should be done to help the student with areas of difficulty
- A description of what will be done in the classroom to help the student
- A description of what resource people will help the student and in what areas

# NOW AVAILABLE!

In this new edition Linda Siegel offers more strategies to help teachers, parents, and others support people with dyslexia and other learning disabilities.



[DYSLEXIAIDA.ORG](http://DYSLEXIAIDA.ORG)

BOOKSTORE

FOR INTERNATIONAL ORDERS EMAIL  
[BOOKSTORE@DYSLEXIAIDA.ORG](mailto:BOOKSTORE@DYSLEXIAIDA.ORG)

International  
**DYSLEXIA**  
Association®

BGCA 80th Scientific Conference