


**F34**  
**Dyslexia 101**  
**Chicago IDA conference**  
**November 11, 2011**


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What is reading?

- Reading is a process in which the reader translates symbols on a page into words and then attaches meaning to those words.
- The reader reads to gain information.



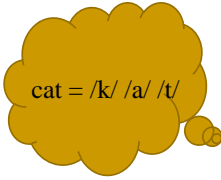
Learning to read is  
**NOT** a natural process

- Reading is unlike learning to *speak* the language of one's culture by being immersed in that language.
- Learning to *read and to spell* in a culturally invented written language, requires instruction in how that language is structured.




cat

Decoding



Comprehension



Neuhaus Education Center logo: Better Readers • Brighter Futures

Reading


Decoding

1. Instant word recognition
2. Sound/symbol
3. Structural analysis
4. Context

F  
L  
E  
N  
C  
Y

Comprehension

1. Oral language
2. World knowledge
3. Strategic thinking
4. Inference making




Simple View of Reading (SVR)

- The ultimate goal of reading is comprehension
- Reading comprehension involves two components – decoding and language comprehension
- The simple view of reading can be expressed with the formula:

RC = D x LC


(Gough & Tunmer, 1986)



**SVR**

1 Adequate D Adequate LC	2 Poor D Adequate LC
3 Adequate D Poor LC	4 Poor D Poor LC

(Gough & Tunmer, 1986)

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**Current research**

Brain research sponsored by


- *National Institute of Child Health and Human Development (NICHD), International Dyslexia Association (IDA), and others.*

National Reading Panel  
commissioned by US Congress 1997 and reported in 2000.

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**National Reading Panel Report**  
Six principles to guide reading instruction

1. Begin teaching *phonemic awareness* directly in kindergarten.
2. Teach each letter-phoneme relationship explicitly. (decoding)
3. Teach frequent, highly regular letter-sound relationships systematically. (decoding)

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**NRP Report (cont.)**


4. Show children exactly how to sound words out. (decoding)
5. Give children connected, decodable text to practice the letter-phoneme relationships. (fluency)
6. Use interesting stories to develop language *comprehension*. (+ vocabulary)

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**Effective reading instruction**  
includes *direct* instruction in:


1. Phonemic awareness
2. Decoding
3. Fluency
4. Vocabulary
5. Comprehension

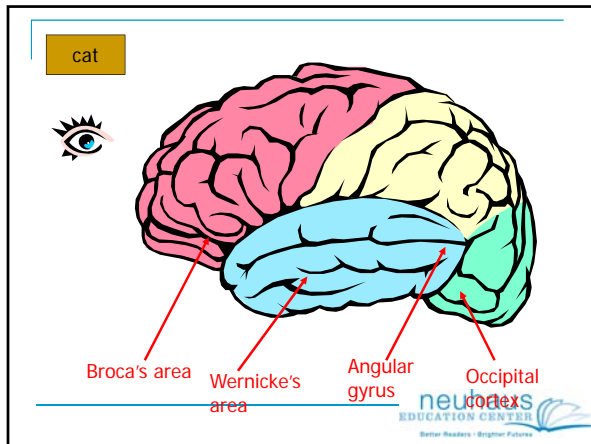
source:  
NRP report-2000

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- “Reading relies on the same brain circuits already in place for language.”

Overcoming Dyslexia  
S.Shaywitz

 Better Readers • Brighter Futures



### Response to Intervention/RTI K -2

- Tier 1 – Core Reading programs in the regular classroom w/ progress monitoring
- Tier 2 – Intervention Programs in small groups for a short time
- Tier 3 – Remedial Programs more intensive reading remediation (dyslexia programs)

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### Dyslexia: Definition and Practice

- What is dyslexia?
- What strategies are effective in teaching students to read and spell?
- What laws relate to dyslexia?

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- **Is dyslexia a new term?**

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Is dyslexia a new term?

The term dyslexia has been used since 1887. The term was first used by Dr. Berlin, a German ophthalmologist.

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### Samuel T. Orton Psychiatrist and Neurologist

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Is dyslexia a new term?

- Father of Dyslexia (strephosymbolia)
- 1919 - University of Iowa
- 1926 - Presented *Interpretation of Developmental Reading Disability to The American Neurological Association.*

Is dyslexia a new term?

## Dr. Orton

- Identified the syndrome of specific language disability
- Separated disabled readers from students with intellectual disability, brain damage, and primary emotional disturbances.
- Proposed a system for diagnosis
- Outlined principles of remediation for disabled readers

## Anna Gillingham



Anna  
Gillingham

- Psychologist and Teacher
- Analyzed and organized the English language for the teaching procedures that Dr. Orton devised (1930's)
- Trained teachers to use this system

- **Do dyslexics see things backwards?**

Do dyslexics see things backwards?

When students were asked to copy designs and Hebrew alphabet letters, the dyslexics did as well as the non-dyslexics.

Vellutino, 1986

b d  
p q

- Do dyslexic students make more reversal errors than other students?

Do dyslexic students make more reversal errors than other students?

Researchers have found that while dyslexic students make *more* errors than proficient readers, the *percentage* of reversal errors is *not* significantly different for the two groups.

Source:  
N.I.C.H.D.

- How is a dyslexic reader different from a skilled reader?

How is a dyslexic reader different from a skilled reader?

Dyslexic readers do not pick up the patterns of a language.

- Phonological level
- Orthographic level



How is a dyslexic reader different from a normal reader?

On a phonological level, they have difficulty with...

- rhyming
- identifying the number of words in a sentence
- identifying syllables in a word
- identifying individual sounds in a word



How is a dyslexic reader different from a skilled reader?

Deficits in phonological awareness reflect the core deficit in dyslexic readers.

Source:  
N.I.C.H.D.



How is a dyslexic reader different from a skilled reader?

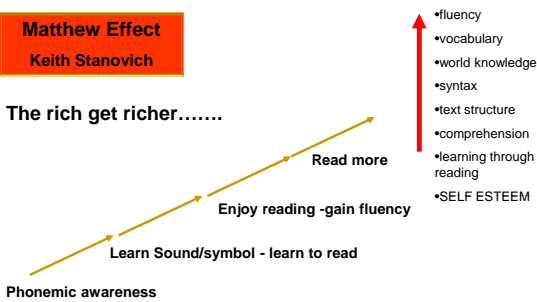
The best predictor of reading ability/disability from kindergarten and first grade test performance is phoneme segmentation ability.

Source:  
N.I.C.H.D.

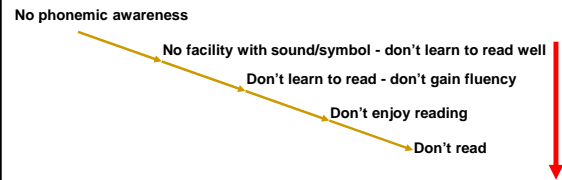


**Matthew Effect**  
Keith Stanovich

The rich get richer.....

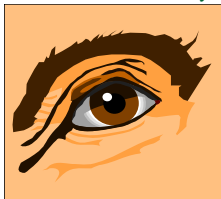


...and the poor get poorer



How is a dyslexic reader different from a skilled reader?

On an orthographic level, dyslexics have difficulty...



- grouping common letter groups such as *tch, igh, str*
- knowing how to pronounce the vowels
- dividing words into syllables



How is a dyslexic reader different from a skilled reader?

For example...

- bome & mabe
- gtsi & ynrh



How is a dyslexic reader different from a skilled reader?

The ability to read and comprehend depends upon rapid and *automatic* recognition and decoding of single words.

Source:  
N.I.C.H.D.



How is a dyslexic reader different from a skilled reader?

### Another core deficit...

- In addition to a weakness in phonological awareness, there is also a weakness in the ability to name in rapid succession.

Source:  
N.I.C.H.D.



o a s d p a o s p d  
s d a p d o a p s o  
a o s a s d p o d a  
d s p o d s a s o p  
s a d p a p o a p s



How is a dyslexic reader different from skilled reader?

Dyslexia is a specific language-based disorder...characterized by difficulties with single word decoding.

Source: N.I.C.H.D.



### Dyslexia is...

- Dyslexia is a specific learning disability that is neurological in origin. It is characterized by...
  - difficulties with accurate and/or fluent word recognition, and
  - by poor spelling and decoding abilities.
- These difficulties typically result from... a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction.

Adopted by the IDA Board of Directors, Nov. 12, 2002. This Definition is also used by the National Institute of Child Health and Human Development (NICHD).



### Dyslexia is...(continued)

- Secondary consequences may include problems in reading comprehension, and
- reduced reading experience that can impede growth of vocabulary and background knowledge.

Source: IDA and NICHD



## Dyslexia...

- Studies show that individuals with dyslexia process information in a different area of the brain than do non-dyslexics.
- Many people who are dyslexic are of average to above average intelligence.

Source: IDA and NICHD

How is a dyslexic reader different from a skilled reader?

Slow and inaccurate decoding are the best predictors of difficulties in reading comprehension.

## Reading Comprehension is influenced by:

- Decoding skills
- Reading Fluency (rate and accuracy)
- Language / listening comprehension
- World knowledge / oral language
- Strategic thinking
- Inference making
- Attention

## Language Learning Disability

- Involves all aspects of language including the sounds and meaning of words.
- Reading difficulty is at the level of both decoding and comprehension.
- Language difficulties of all sorts are prominent.
- Language deficiencies may influence intelligence scores.
- Present from birth.

Overcoming Dyslexia  
By Sally Shaywitz

## Developmental Dyslexia

- Phonological weakness is primary.
- Other components of the language system are intact.
- Reading impairment is at the level of decoding the single word both accurately and fluently.
- Intelligence scores are not affected and may be in the superior or gifted range.
- Present from birth

Overcoming Dyslexia  
By Sally Shaywitz

- **How can dyslexic students learn to read?**

Effective Reading Intervention =

***Multisensory  
Structured  
Language  
Education (MSLE)***



**Multisensory Structured Language  
Education (MSLE)**

Includes *direct* instruction in:

- Phonemic awareness,
- Letter recognition,
- Decoding,
- Fluency,
- Comprehension,

In a multisensory, structured, sequential, intensive reading intervention curriculum (such as Orton-Gillingham- based curricula)

NICHD & IDA Fact Sheet



**What does it mean to be an  
Orton-Gillingham  
reading curriculum?**

Structured, sequential, cumulative curriculum which includes intensive instruction in:

- Phonology
- Sound/symbol association
- Syllable instruction
- Morphology
- Syntax
- Semantics

Using multisensory and discovery strategies

IDA Fact Sheet



**Some Facts**

- In one study, 90% of all children identified as *learning disabled* were referred for special education services because of *reading* problems. (Kavalen and Forness, 2000)
- 90% of these children have problems with “word recognition skills.” (NICHD)
- *Dyslexia* is defined as a difficulty decoding single words (word recognition skills).



Therefore...

- A multisensory, structured language education curriculum, which includes instruction in decoding, comprehension, and fluency, is appropriate for a large portion of students identified with reading difficulties, regardless of the specific educational placement.



Is dyslexia more common among boys than girls?

Recent research shows that as many  
girls are affected as boys.



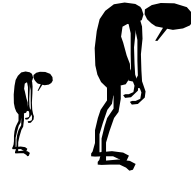
Source:  
N.I.C.H.D.



Won't most students outgrow dyslexia?

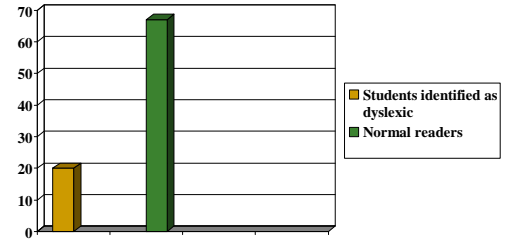
Longitudinal studies show that of the children who were reading disabled in grade three, (and received no specific reading remediation)...74% remained disabled in grade nine.

Source:  
N.I.C.H.D.



Are there many dyslexic students?

## Students Identified with Dyslexia



- Yes, dyslexia can be inherited.



## Legislation

<b>Section 504</b> Rehabilitation Act Of 1973 and Americans with Disabilities Act Amendments Act	Federal (no funding)	<ul style="list-style-type: none"> <li>• Must provide appropriate education in least restrictive environment</li> </ul>
<b>94-142</b> <b>IDEIA</b>  (Special Ed Law)	Federal (funding)	<ul style="list-style-type: none"> <li>• RTI or a 16 point discrepancy</li> <li>• Must provide an individualized educational plan</li> </ul>
<b>Texas</b> <b>Dyslexia</b> <b>Law</b>	State (no specific funding)	<ul style="list-style-type: none"> <li>• Program must include reading, spelling, and writing</li> </ul>

## Special Education (IDEIA)

- PL 94-142 passed U.S. Congress (1975)
- Revised 1995 and 2004
- Thirteen areas of qualification  
One is *Specific Learning Disabilities*

## How do students qualify for Special education?

- A referral
- A psycho-educational evaluation  
(discrepancy between IQ & achievement or RTI)
- Admission, Review, and Dismissal (ARD)  
Committee meeting (may have a different name in Illinois)
- Individualized Educational Plan (IEP)

## Response to Intervention/RTI K -2

- Tier 1 – Core Reading programs in the regular classroom with progress monitoring
- Tier 2 – Intervention Programs in small groups for a short time
- Tier 3 – Remedial Programs more intensive reading remediation (dyslexia programs)

## Section 504 Rehabilitation Act of 1973

- No funding  
General civil rights legislation  
(a disability that substantially limits a major life activity, such as ...*learning, reading*...)
- Allows for accommodations
- May provide assistance for students with learning differences who do not qualify under IDEA.

## The Dyslexia Handbook: Procedures Concerning Dyslexia and Related Disorders by the Texas Education Agency

[www.region10.org/dyslexia](http://www.region10.org/dyslexia)

## Important Intervention Findings

- *Which* direct instruction alphabetic program is less important than intensity, duration, and explicitness, so long as the program is structured and provides opportunities to read and write.



\*Florida State  
University

## Dyslexia

- The differences are personal.
- The diagnosis is clinical.
- The treatment is educational.
- The understanding is scientific.

*The Many Faces of Dyslexia* by  
Margaret Rawson

## What is the prognosis?

- Severity
- Age of intervention
- Support of parents and educators
- Innate intelligence
  
- Perseverance

Dr. Tom Zion (retired)  
Meyers Center  
Texas Children's Hospital

## Islands of Competence

- It is important to help the child identify areas of strengths and develop some expertise, these are ... *islands of competence*.
- "Resilience comes from a mindset associated with optimism, hope, satisfying interpersonal relationships, and effective coping strategies."
- Dr. Robert Brooks, Ph.D., Psychologist  
*Raising Resilient Children, with Sam Goldstein, Ph.D.*  
[www.drrobertbrooks.com](http://www.drrobertbrooks.com)

## What is a parent to do?

- Educate yourself about reading and dyslexia.
- Share what you learn with your child's teachers.
- Ask questions.
- Learn about the reading programs in your child's school.
  - Which curricula are being used?
  - How & when is progress monitored?
- Be proactive and involved in your child's education inside and outside the school.
- Network with other parents.

## A few of many reliable websites:

- International Dyslexia Association [www.interdys.org](http://www.interdys.org)
- Illinois Branch of IDA [www.readibida.org](http://www.readibida.org)
- Neuhaus Education Center [www.neuhaus.org](http://www.neuhaus.org)
- Reading Teachers Network [www.readingteachersnetwork.org](http://www.readingteachersnetwork.org)
- Yale Center for Dyslexia & Creativity [www.dyslexia.yale.edu](http://www.dyslexia.yale.edu)
- Wright's Law [www.wrightslaw.com](http://www.wrightslaw.com)

## Check out our web site:

[www.neuhaus.org](http://www.neuhaus.org)

Click on *What is dyslexia > How can I help my child > Resources for parents...*

You will find...

- **"You CAN Help Your Child"**  
our parent information booklet
- **Links** to reliable information on the web.

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