

**Dyslexia and Effective Learning**

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# Dyslexia definition

Reid (2009)

- *“Dyslexia is a **processing difference** characterised by difficulties in literacy*
- *it can affect **cognition** such as memory, speed of processing, time management, co-ordination and directional aspects.*

- *Can be visual and phonological difficulties*

- *there is usually **discrepancies** in performances*

*It is important that the **individual differences** and learning styles are acknowledged*

# Major Theories of Dyslexia

1. The Phonological Deficit
2. The Double Deficit Hypothesis
3. Magnocellular Deficit

Hypotheses

4. The Automatisisation Deficit

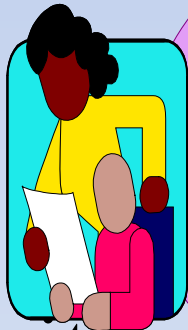
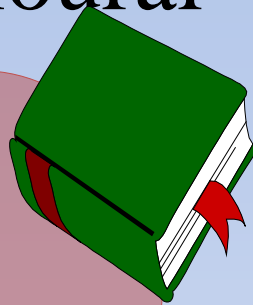
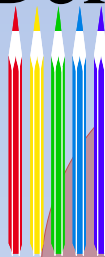
Hypothesis

5. The Cerebellar Deficit

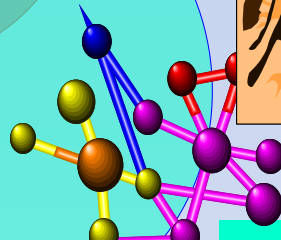
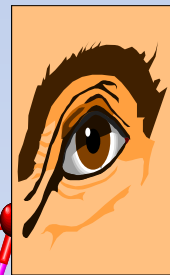
Hypothesis

# Causal Modeling Framework

Behavioural



Cognitive



Biological



# Neurological/biological factors

- genetic factors
- cortical abnormalities
- magnocellular deficit hypothesis
- the role of the cerebellum
- dietary factors
- inhibition of primitive reflexes
- left hemisphere under stimulation
- convergence difficulties and binocular instability
- visual sensitivity and coloured filters and eye movement co-ordination
- hemispheric symmetry

# Cognitive Dimension

- **Cognitive factors**
- phonological processing
- naming speed
- working memory
- metacognitive factors
- automaticity

# Behavioural dimensions

- pattern of errors in reading and spelling
- writing difficulties
- time management difficulties
- more time to complete work
- inaccuracies in copying
- avoidance of writing
- discrepancies in performances in curricular activities



# Environment

- **Environmental/contextual factors**
- learning environment
- learning styles
- education policy/legislation
- staff training
- social and cultural factors



**Structure**



**Build a bridge**

**Need a structure to understand the task**

1. Make a list of the materials you will need
2. Then have a look at the book in the library on bridges
3. Decide the kind of bridge you want to build. Make a list of three possible types of bridges
4. Go outside and survey to decide where the bridge will be built – give three reasons for this.

5. Have a look at colours and styles and decide if you need any more materials

6. Make a list of each of the tasks and check each after completion.

Reflection: what did you find difficult ; what did you find easy?

# **We can anticipate barriers to learning...**

## **Memory**

- Remembering instructions
- Remembering sequences
- Forgetting equipment
- Confusion with time, dates and days of the week
- Remembering rules and patterns

## **Social Skills**

- Turn taking
- Sharing
- Listening
- Social conventions
- Other people's feelings
- Appropriate social behaviour

## **Speed of Working**

- Handling time pressures
- Working too fast/too slow
- Using inefficient methods
- Constantly checking
- Lose track of aim and/or purpose of task

## **Organisation**

- Planning
- Structures of working
- Presentation
- Clarity in response
- Procedures
- Focus
- Resources

Hughes and Cooper  
2007  
Understanding and  
Supporting  
children with ADHD

# ADHD

- Avoid confrontational situations
- Show the child respect
- Listen to the child's concerns
- Avoid distraction
- Keep instructions to a minimum –one at a time
- Provide re-assurance on tasks
- Split tasks up into short tasks with breaks
- Enable them to complete the child's work
- Provide a routine
- Provide outlets for active behaviour
- Provide a clear structure in the class

could also apply to

dyslexia

Autistic spectrum

dyspraxia

# Observation

- **Organisation**
- **Attention**
- **Sequencing**
- **Interaction**
- **Self-concept**
- **Learning preferences**
- **Independent learning**

# **Learning Environment**

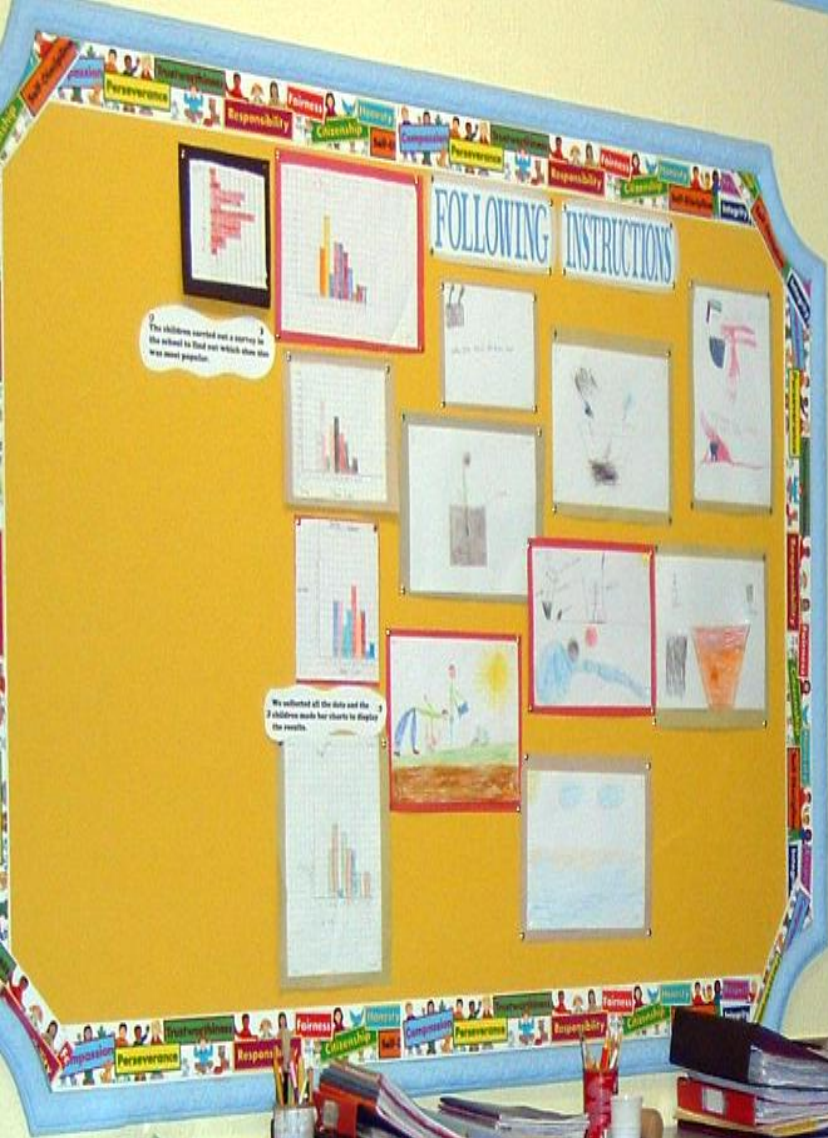
- **Classroom design**
- **Recognise cultural diversity**
- **Individual environmental preferences – music , movement, lighting**
- **Student sense of ownership**



# Environmental factors

- light
- sound
- design
- general  
ambience
- furniture
- layout





# Learning Styles?

Learning styles are characteristic, cognitive, affective and physiological behaviours that serve as relatively stable indicators of how learners perceive and interact with to learning environment.

Learning Style – Theory and  
Practice

Jim Keefe 1987

# PSYCHO-GEOMETRICS

## 2

Please draw the following shapes:

- Square
- Rectangle
- Circle
- Triangle
- Squiggle

# Square

- **Uniform**
- **Exact**
- **Facts**
- **Detail**
- **Predictable**
- **Dependable**
- **Organised**
- **Structure**


# **Rectangular Transition**

- **Uncertain**
- **Flexible**
- **Forgetful**
- **Need Scope**
- **Untidy**
- **Inquisitive**
- **'On-edge'**
- **Courageous**

# Circle

- **Good At Listening**
- **Can Compromise**
- **Conciliatory**
- **Reflective**
- **Accept Different Views**

# Triangle

- 
- **Ambitious**
  - **Leader**
  - **Needs To Achieve**
  - **Good At Making Decisions**
  - **Purposeful**

# Squiggle

- **Divergent Thinker**
- **May Be Disorganised**
- **Creativ**
- **Original**
- **Different Way Of Thinking**
- **Erratic ?**



# Strategies for analytic learner

- Checklists
- Researching for information
- Set achievable goals
- Extension exercises
- Give time limits
- Likes structure, sequence and order

# Strategies for global learner

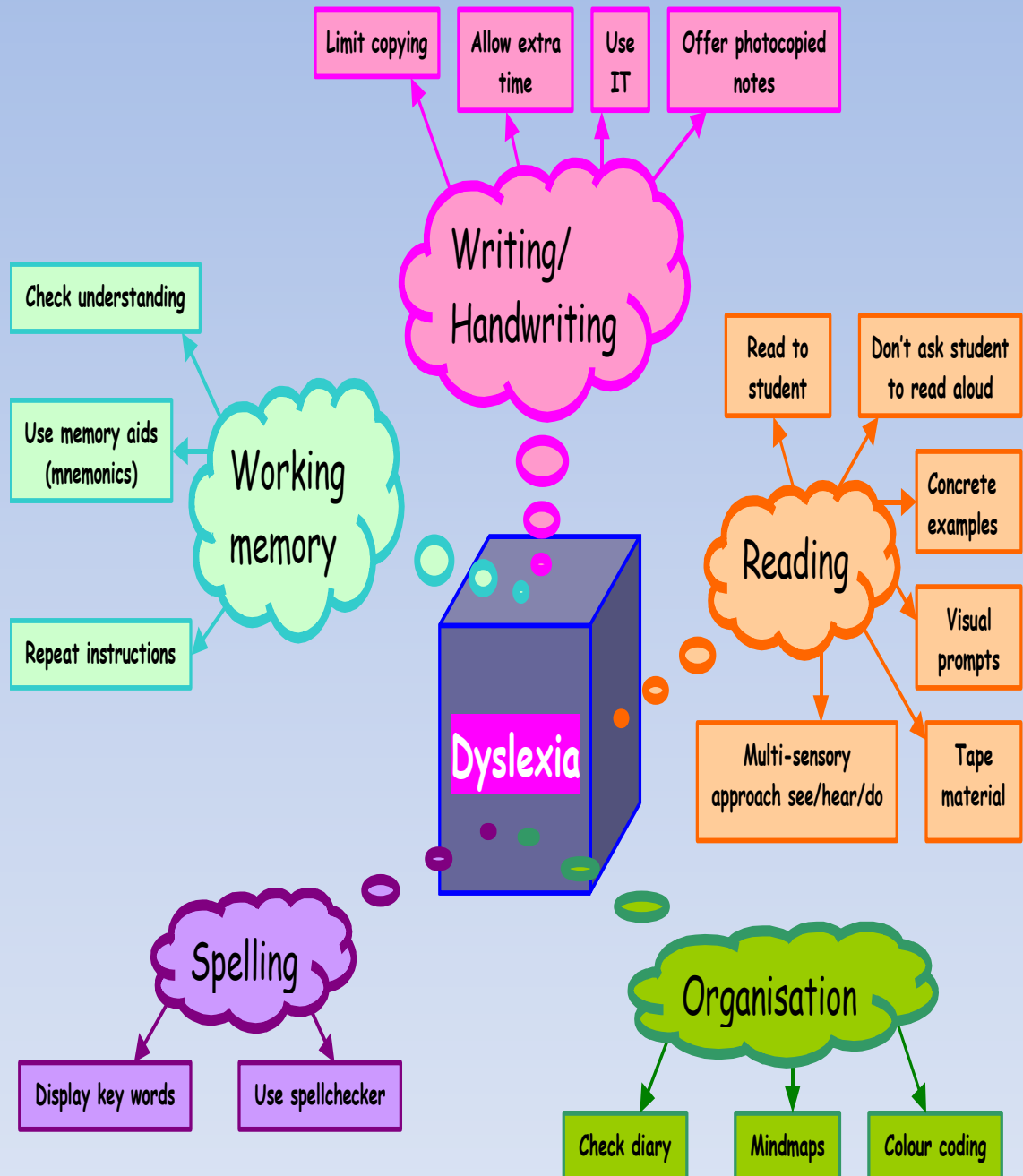
- Work in groups
- Include lots of discussion
- allow scope for creativity

but

provide some kind of structure

- Active and interactive learning
- Lots of why questions
- Lots of visuals, colour, music
- Usually can cope fairly well with background noise

# Dyslexia - What can we do to help?



# **The Dendrite Song**

**Use your dendrites,  
Use your dendrites,  
To connect**

**throughout your brain**

**Take in info, analyse it,**

**Grow some new ones**

**Unrestrained**

# **Stimulation**

**Is what the brain needs**

**To make dendrites stretch  
and grow.**

**New connections**

**Make us smarter**

**In what we think and what  
we know.**

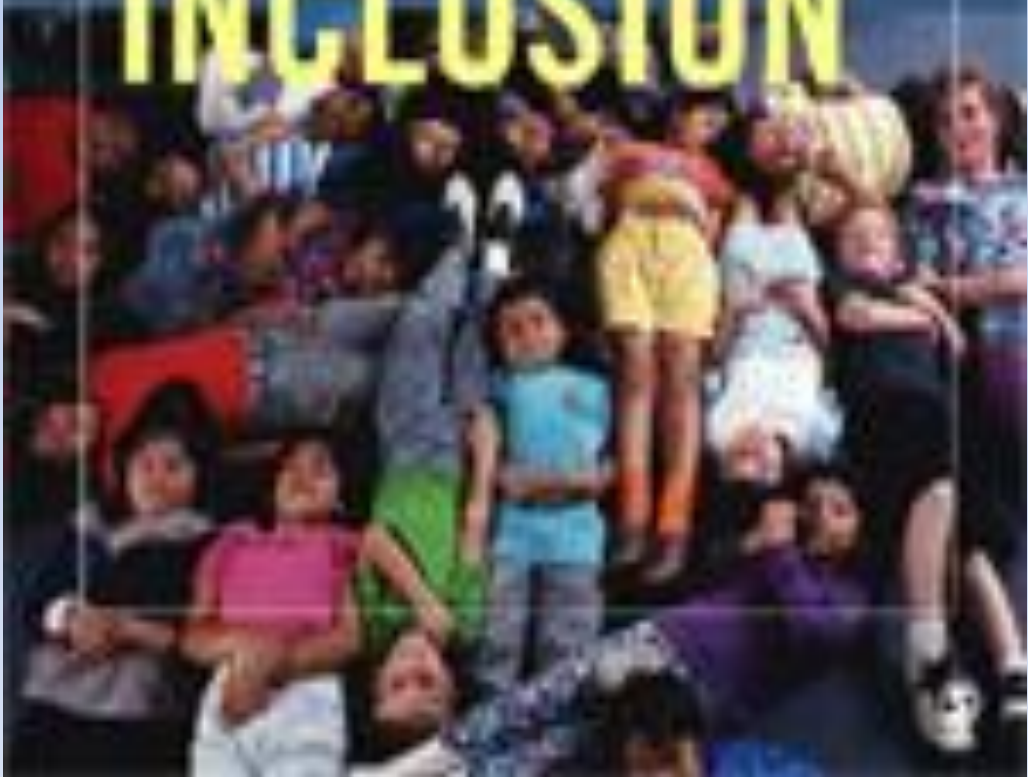
**Axons send out  
Neurotransmitters  
To the dendrites all around  
Across the synapse  
Jumps the impulse  
New ideas can now about**

**Use your dendrites,  
Use your dendrites,  
To connect throughout  
your brain.  
Take in info, analyse it,  
Grow some new ones  
Unrestrained.**



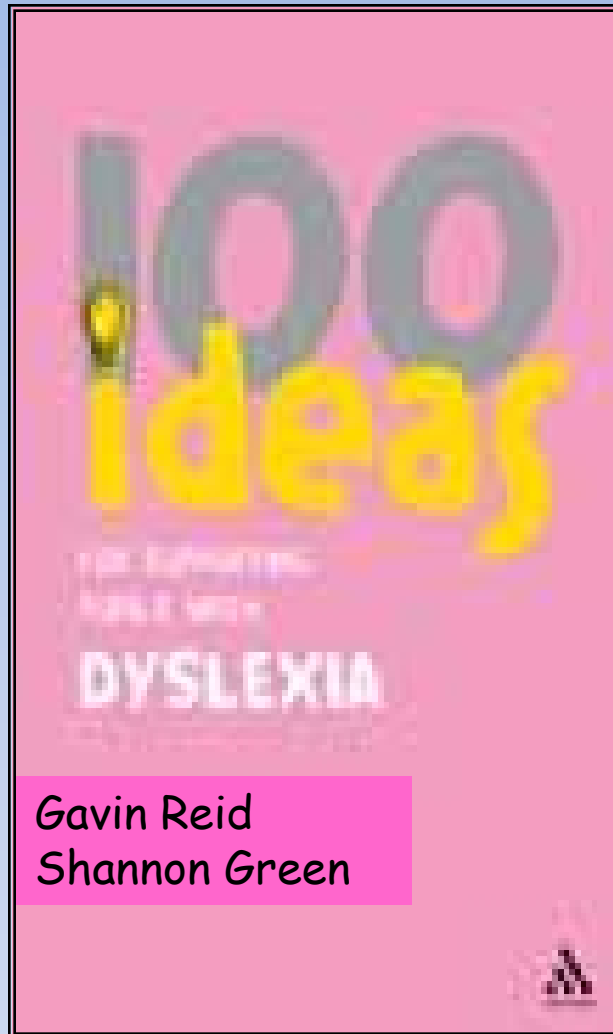
Gavin Reid

# LEARNING STYLES AND INCLUSION



Gavin Reid (2005) Paul Chapman  
Publishers



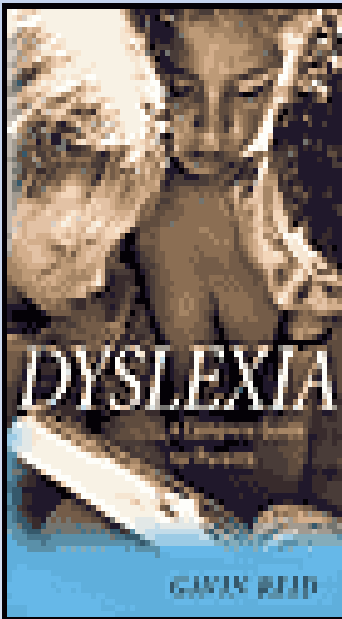


[www.continuumbooks.com](http://www.continuumbooks.com)

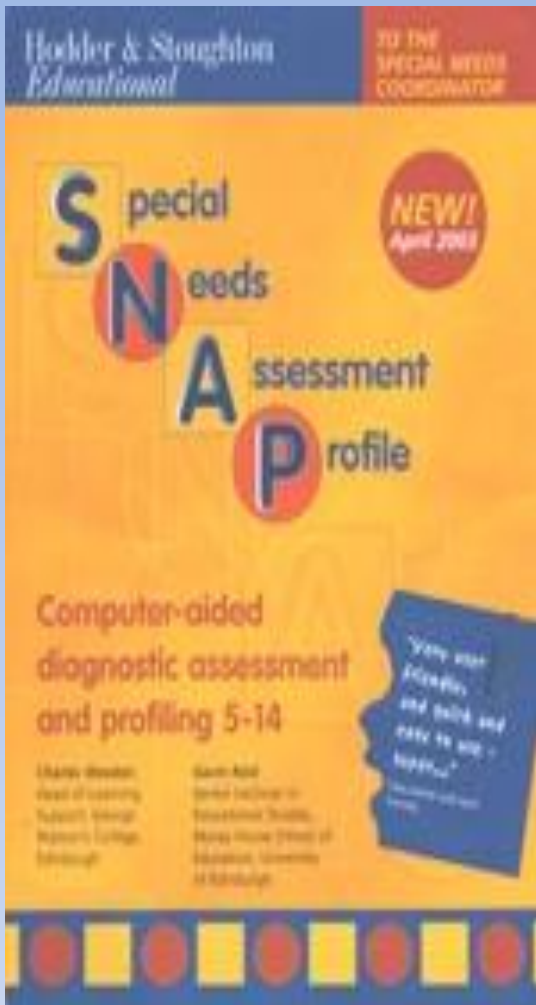
## Gavin Reid - Books



**Reid, G. (2003) Dyslexia:  
A Practitioners Handbook  
(3rd edition) (Wiley)**



**Reid, G. (2004) Dyslexia:  
Complete Guide for Parents  
(Wiley)**



# Weedon, C. and Reid, G. (Special Needs Assessment Profile (SNAP))

Hodder Murray  
[www.snapassessment.co.uk](http://www.snapassessment.co.uk)

# Further details

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