Positive Dyslexia

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European Dyslexia Association
San Marino, June 2015
My Objective: To Inspire You!

1. Is this someone I can trust!?
2. What’s the message?
3. Powerful and Challenging Ideas
4. What’s in it for me?
Plan of Talk

1. Positive Dyslexia
2. Strengths and Dyslexia
3. Succeeding in Society
4. Succeeding in School
5. The ShowBook
6. The Way Forward
My Curriculum Vitae
Academic Impact

A TINS debate – Hindbrain versus the forebrain: a case for cerebellar deficit in developmental dyslexia

Progressive improvement in reading and writing skills, through school and beyond, is something that many of us take for granted. However, for people suffering from dyslexia, these skills are not acquired in the usual manner. For many years it has been thought that brain differences in the frontal areas related to language are the likely source of the problems. However, it has recently been established that the problem associated with this syndrome is to be found in reading-related problems between motor skills and sensory processes can be affected. An explanation for this syndrome could be the apparent disruption of the problem has proved elusive. Roderick Nicolson, Angela Fawcett and Paul Dean believe that a deficit in cerebellar performance might provide a complete explanation. A key issue in the argument presented is to the forebrain. But cerebellar deficit explain all deficits experienced by dyslexics? Are those that experience cerebellar damage later in life similarly affected to the cerebellum in the sole contributor to dyslexia?

Two key points in this paper: Thomas Zeffirelli and Guillaume Eden, and Richard B. Ivry and Timothy C. Justice, deal with these and other questions. It is possible to miss the point that the acquisition of reading-related skills requires the coordination of many areas of the brain involved in visual, motor and cognitive activities, and that an increased understanding of dyslexia could provide insights for beyond the disorder itself. The conclusion to this debate is provided by Roderick Nicolson and his colleagues.

Developmental dyslexia: the cerebellar deficit hypothesis

Procedural learning difficulties: reuniting the developmental disorders?

Roderick I. Nicolson and Angela J. Fawcett
Department of Psychology, University of Sheffield, Sheffield S10 2TP, UK

The cognitive neuroscience of learning has recently followed a parallel course, with recognition that there are separable, interwoven systems of memory and learning processes with different functional roles. It is proposed that these new conceptions of learning abilities and networks offer a perspective that might provide more behavioral, psychological, and developmental insights into understanding the cognitive processes underlying learning.

Causal explanations of dyslexia

Research into dyslexia provided the background to the analysis. Developmental dyslexia is defined as unexpected difficulties in learning to read in children of average or above-average intelligence. A breakthrough in dyslexia research occurred in the 1980s, with the demonstration that dyslexic children lag behind their
Applied Impact
Positive Dyslexia Origins:
The BDA and IDA Conference Presentations
Succeeding with Dyslexia

Positive Psychology:
Signature Strengths

Authentic Happiness

Diagnosis for Support

Teaching and support
Symposium
Positive Dyslexia: Working to our Strengths

1. Rod Nicolson: Positive Dyslexia: Follow Your Stars
2. Sara Agahi: Strengths of Dyslexia in the workplace: A Positive Psychology approach
3. Thomas West: Dyslexia: A Strengths Approach
4. Brock Eide: Understanding and Fostering the Cognitive Advantages in Individuals with Dyslexia
5. Forum

Symposium presented at
IDA Parents Conference, Baltimore
October 2012

15,761 views
My Message

+ The Dyslexia community has made outstanding progress
  • Awareness
  • Legislation
  • Research

- But this has been at the expense of
  • Disability
  • Disempowerment
  • Disengagement
  • Despair

It’s time to look at the light side!
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. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede the growth of vocabulary and background knowledge.

Adopted by the Board of Directors, International Dyslexia Association: November 12, 2002
… But clinical psychologists also began to find something disconcerting emerging from therapy: even on that rare occasion when therapy goes superbly and unusually well, and you help the client rid herself of depression, anxiety, and anger, happiness is not guaranteed. Emptiness is not an uncommon result.

… Curing the negatives does not produce the positives. …

The skills of becoming happy turn out to be almost entirely different from the skills of not being sad, not being anxious, or not being angry.
Positive Psychology
Positive Psychology

1. In 1998, Martin Seligman (APA President) argued that the focus of Psychology on problems is only one side of the coin
2. Initiated the Positive Psychology movement. This focuses on strengths & building the best in life!
3. Designed not to replace existing fields but supplement them
4. Strong emphasis on empowering the individual
Pillars of Positive Psychology

1. **Positive experiences**
   happiness, pleasure, & joy

2. **Positive individual traits**
   character, talents & interests

3. **Positive institutions**
   families, schools, businesses, communities & societies

- Growing literature captured attention of academics & the media
- A movement not a profession
24 Character Strengths & Virtues

1. Wisdom & Knowledge
   Creativity, Curiosity, Love of learning, Open-mindedness & Perspective

2. Courage
   Authenticity, Bravery, Persistence and Zest

3. Humanity
   Kindness, Love, Social intelligence

4. Justice
   Fairness, Leadership & Teamwork

5. Temperance
   Forgiveness, Modesty, Prudence, Self-regulation

6. Transcendence
   Appreciation of Beauty & Excellence, Gratitude, Hope, Humour, Spirituality
Positive Dyslexia
Positive Dyslexia

1. Overall Aim
   - “To develop the understanding, tools and environment needed to allow every dyslexic individual to identify, develop and utilise their own strengths productively”

2. Methods
   - Big Picture, consider the ‘eco-system’ as a whole
   - Societal, Individual, Theoretical, Philosophical
   - Suit the method to the task

3. Philosophy
   - Inclusion
   - Engagement
   - Copenhagen-Medici model (Seligman, 2008)
Positive Approach

1. Identify and **empower** to work to Signature Strengths
   - working for one’s own development rather than to someone else’s tune
2. Identify and **guide** toward careers involving Strengths
   - Better career advice
   - Better diagnostic information
3. **Empower and involve** stakeholders
   - Parents
   - IDA / BDA / EDA
Positive Dyslexia Career Development

Special skills

Entrepreneur

Innovative

Media

Empathy

Acceleration

Business Skills

Enterprise

Science

Creativity

Spatial

Networking

Design

Emotional Intelligence

Teamwork

Inspiration

Richard Branson

Ingvar Kamprad

Dean Kamen

Sir Richard Rogers

Steven Spielberg

John Lennon

Susan Hampshire

Bono
The ‘Positive Dyslexia Journey’

- **Strengths**
  - Positive Assessment

- **Inspirations**
  - Positive Ambitions

- **Goal-directed activities**
  - Positive Acceleration

- **Success**
  - Positive Career

- **Job-crafting**

**Flow:**
- Positive Assessment → Positive Ambitions → Positive Acceleration → Positive Career → Success → Positive Ambitions
My 2020 Visions

• Dyslexia in the Workplace
  We cannot compete with [Google / BBC / Virgin etc] because they have more dyslexics than us in top positions
  – opportunity not obligation for the bosses

• Parent
  I know that, if we all work at it, my child has every chance of a successful and fulfilling career and life
  – individual planning and empowerment

We now have the tools and the science to do this
Plan for rest of talk
The agenda for Positive Dyslexia...

- How to Build Movement?
- Why Weaknesses?
- What Strengths?
- Why Strengths?
- How to Rebrand?
Positive Dyslexia: What strengths?
What are the signature strengths of dyslexia?
Priscilla Vail, Ron Davis, Marshall Raskind, Thomas West, Brock & Fernette Eide, Dan Pink

- Creativity
- Visual / Spatial skill
- Declarative Learning
- Social Skills
- Resilience
- Focus
- Determination
- Teamwork?
- MIND strengths
- Self-awareness
- Proactivity
- Perseverance
- Goal-setting
- Effective support systems
- Emotional stability
- Design, Story, Symphony, Empathy
Sheffield Strengths Studies (2012/15)  
Agahi, Sepulveda, Mumford & Nicolson

1. In depth interviews with successful dyslexic adults in a range of careers (Agahi)
   - A salesman, a software analyst, an author, a lawyer, a doctor, an architect, a journalist, and a researcher
   - Structured interviews, Interpretative Phenomenological Analysis (qualitative)
   - Systematic methodology for extracting common themes

2. Equivalent study with entrepreneurs (Sepulveda)

3. High level reasoning test with students (Mumford)
Dyslexia ‘Strengths Decathlon’

1. The Cognitive Skills Triad
   - Big Picture
   - Visuo-Spatial Skills
   - Creativity / Innovation

2. The Social Skills Triad
   - Teamwork
   -Empathy
   - Communication

3. The Work Skills Triad
   - Determination / Resilience
   - Proactivity
   - Flexible Coping

4. Unconventional thinking
Positive Dyslexia: Why strengths?
The Delayed Neural Commitment Hypothesis

1. Dyslexic individuals are relatively slow to automatise skills and build / rebuild neural networks
2. They therefore show ‘delayed neural commitment’
3. This occurs in most skills, especially language-based ones
4. While generally DNC is associated with slower and more effortful processing, it can endow advantages, especially in circumstances where it is useful to maintain earlier skills, or valuable to combine two different skills which do not normally occur within the same ‘time window’
5. DNC can therefore lead to two crucial advantages:
   • Retention of access to pre-linguistic skills
   • Combination of knowledge from two different domains
Why Strengths under DNC?

1. First and foremost, the more you use a skill the better it gets. Dyslexic adults tend to use their Declarative (mind-based) skills more than their weaker Procedural (brain-based) skills.

2. Their mind-based skills therefore continue to improve. By contrast, once a habit (procedural) is learned, that’s it. No further improvement.

3. The problems that dyslexic children suffer at school means they acquire skills in getting help, understanding others, individual differences. These social skills pay off throughout life!

4. Again, school problems mean that dyslexic children are used to thinking their way round problems, whereas normally-achieving children have much less need and opportunity. These work skills pay off throughout life!
Positive Dyslexia: Succeeding in Society
• Need for Big Picture
  - It’s not enough to persuade dyslexic people that they have potential strengths to develop and treasure
  - We need to ‘sell’ dyslexia to society as a strength not a weakness
• Core insight, based on solid experimental psychology, was that it is necessary to see the situation through the eyes of the customer if one is to be able to sell him/her anything

• Transformed sales field
1. Computers are taking over the rational brain functions, and they can also be out-sourced to countries with a highly trained but lower paid workforce

2. The world of the rational brain is gone, the successes of the 21\textsuperscript{st} century will use the right brain

3. The Six Senses
   - Not just function but also Design
   - Not just argument but also Story
   - Not just focus but also Symphony
   - Not just logic but also Empathy
   - Not just seriousness but also Play
   - Not just accumulation but also Meaning

4. The Situation, the Problems for 21\textsuperscript{st} Century Companies
21st Century Strengths

1. What are the sources that CEOs respect and trust?
   - The Knowledge Economy
   - Avoiding ‘competition to the bottom’

2. Popular concepts
   - Human Capital
   - Competitive Advantage
   - 8 Hard-to-train competences - Ruyle & Orr 2007
   - Four Capabilities Framework – MIT Sloan
   - Seven Habits - Stephen Covey
   - The 6 senses - Dan Pink – Whole New Mind
   - The 5 dimensions - Peter Senge – the learning organisation
21st Century Strengths

- Innovation management
- Conflict management
- Political Savvy
- Understanding others
- Negotiating
- Sizing up people
- Interpersonal savvy
- Building effective teams
- Sense-making
- Relating
- Visioning
- Inventing
- Be proactive
- Begin with the end in mind
- Put first things first

- Think win-win
- Seek first to understand
- Synergize
- Sharpen the saw
- Design
- Story
- Symphony
- Empathy
- Play
- Meaning
- Building shared vision
- Mental Models
- Team Learning
- Systems Thinking
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21st Century Strengths

Work Strengths  Mental Strengths  Social Strengths

- Proactivity
  - Be proactive
  - Sharpen the saw

- Innovation / Creativity
  - Inventing
  - Innovation management

- Big Picture
  - Story
  - Synergize

- Systems Thinking
  - Put first things first
  - Begin with the end

- Design
  - Mental Models
  - Meaning
  - Visuo-Spatial

- Visioning
  - Symphony

- Teamwork
  - Team Learning

- Relating
  - Conflict management
  - Building effective teams

- Empathy
  - Understanding others

- Negotiating
  - Sizing up people

- Interpersonal savvy

- Communication
  - Seek first to understand
  - Building shared vision
The SPIN Offer to the CEO

- So your **Situation** is that you have an excellent, well-run organisation, but you are concerned that competition from the far east is making it non-competitive.
- The **Problem** is that the competition can reduce costs quicker than you can, laying off people has a range of unintended consequences, and future strategy is therefore unclear.
- The **Implications** are pretty dire.
- What you really **Need** is to recruit new people with the right blend of 21st Century skills, so that your teams work more effectively.

- What would you say if I told you that recruiting an extra 5% to your workforce, who have the skills you need, could double your productivity and give you a lasting competitive advantage?
- What would you say if I told you that you already have these people working for you, and all you need to do is get them onto your talent management program so they can further refine the necessary skills?
Talent Diversity
Talent Diversity

- Most organisations focus - for recruitment and promotion - on the 20th century talents of analysis, rational thinking, planning, target completion. But what about the important unconventional talents?
- For any organisation it is necessary to have a range of talents – talent diversity – since otherwise there is a danger of groupthink and stagnation.
- Diversity in terms of gender, culture and age are already well established as beneficial both for equity and for effectiveness.
- It is an extraordinary oversight that talent diversity has not had an equivalent drive to implement.
- What we need is a comprehensive system to ‘design in’, identify and accelerate talent diversity.
Design for Talent Diversity

- Individual
  - Diverse Talents Finder
  - Positive Acceleration
  - Goal-directed activities

- Organisational
  - Talent Diversity Dashboard
  - Talent Management
  - Positive Career

- Assignment to appropriate track
  - Organisational Benefit
Positive Dyslexia in School
The Positive Dyslexia Journey

• Realistic Positivity
  1. Work out where you’re going
  2. Raise the anchor
  3. Hoist the sails

What is going wrong? Why are they failing? Is it our fault?

Dyslexia Behind Bars
Final Report of a Pioneering Teaching and Mentoring Project at Chelmsford Prison – 4 years on

Jackie Hewitt-Main 2012
Failing in School
Maths Anxiety

• Extensive recent research.
• “math anxiety [is] present at the beginning of formal schooling, which is much younger than was previously assumed … Perhaps most striking, many of the techniques employed to reduce or eliminate the link between math anxiety and poor math performance involve addressing the anxiety rather than training math itself”. Maloney & Beilock (2012 p.405)
• “It is remarkable that cognitive information-processing deficits arising from math anxiety can be traced to brain regions and circuits that have been consistently implicated in specific phobias and generalized anxiety disorders in adults”. Young, Wu & Menon (2012 p.500)
• By ignoring the powerful role that anxiety plays in mathematical situations, we are overlooking an important piece of the equation in terms of understanding how people learn and perform mathematics. Maloney & Beilock (2012)
Traumatic Stress and Learned Toxicity

1. Aversive experiences
   - Shame / Guilt
   - Post-Traumatic Stress Disorder
   - Phobias

2. Aversion
   - Learned Helplessness
   - Toxicity
   - Mental Abscess

3. Trigger stimulus
   - Kryptonite
   - Mental freezing

→ Brain switches state from the flexible ‘declarative’ learning system to the primitive ‘fight, flight or freeze’ defence system
Failing to Learn: Learning to fail…

1. At 5 years old, dyslexic children are not ‘reading ready’ and not ‘classroom ready’ in terms of executive function.

2. Reading instruction places impossible demands on their fragile EF skills. The resulting failures will lead to toxic experiences, resulting in ‘mental abscesses’ that prevent learning in formal instructional environments and may be associated with ‘helpless anger’.

3. In some individuals this helpless anger will lead to truancy, delinquency, offending, in others a range of displacement activities, in others a complete disengagement.

4. In these cases, the children have learned to fail, and we may have, in effect, created the learning disability
Positive Dyslexia: Sinking

Skill

Not ready to learn to read

Reading

Executive function

Speech / Language

3 5 7 years

'Normal' Reading Acquisition

Fluent Reading

toxic reading failure
Succeeding in School
executive functions (EFs; e.g., reasoning, working memory, self-control) can be improved. Good news indeed, since EFs are critical for school and job success and for mental and physical health.

Here I address what can be learned from the research thus far, including that EFs need to be progressively challenged as children improve and that repeated practice is key.

Children devote time and effort to activities they love; therefore, EF interventions might use children’s motivation to advantage.

Focusing narrowly on EFs or aerobic activity alone appears not to be as efficacious in improving EFs as also addressing children's emotional, social, and character development (as do martial arts, yoga, and curricula shown to improve EFs).

Children with poorer EFs benefit more from training; hence, training might provide them an opportunity to "catch up" with their peers and not be left behind.”

Diamond (2012)
Delaying Formal Reading Instruction

1. There is no doubt that reading achievement in the UK and USA is poor. In the 2012 PISA assessments the UK and USA came lowest of the English-speaking countries.

2. The Scandinavian countries have traditionally (a) achieved much better reading than the English-speaking countries and (b) delayed the start of formal reading instruction to 7 years, using the years 5-7 to build confidence, citizenship, classroom readiness and executive function skills.

3. But the US reading researchers argue that one can’t generalise across cultures or languages.

4. Does delaying formal reading instruction actually lead to a deficit that can’t be caught up later?
New Zealand Study: Suggate, Schaughency & Reece, 2013

• Compared 283 children in Steiner schools (RIA 7 years) with those in state schools (RIA 5 years).
• The Steiner children lagged behind in reading at 8 years (of course), but by 11 years had caught up in reading and were slightly ahead in comprehension.
• Personal Communication, thanks to Sebastian Suggate …
• Unlike most studies where those who are already doing well get further ahead, the effect was beneficial primarily for the lower achievers!
• More haste, less speed
Pre-school and Infant School Ideas

If {dyslexic} children cannot learn the way we teach, we must teach them the way they learn…

• Use only natural learning methods appropriate for pre-school children
  - Multi-sensory-motor
  - Personalised
  - Imitation
  - Repetition (but fun and systematic)
  - Success

• Best described as Organic
  - Growing from within
  - One step at a time
  - Bricolage

• Interventions to scaffold Executive Function
  - classroom learning, memory, attention, inhibition, emotional control

• Apps now provide the ideal medium, transforming the educational landscape
The SPIN Offer to the Education Chief

• So your **Situation** is that you have a system designed many years ago that is no longer fit for purpose
• The **Problem** is that the competition in other countries provides an educational ‘product’ of higher quality at lower cost. You have implemented management techniques of targets, inspections, assessments, but this just increases stress and lowers morale without improving attainment
• The **Implications** are pretty dire
• What you really **Need** is to find new and better ways of teaching reading and maths, so that the children learn more effectively.

• What would you say if I told you that an easily-implemented change to early school processes would double your productivity, transform the job satisfaction of all involved, and lead to a substantial increases in school attendance and achievement, while reducing costs…?
• … introduce a ‘21st century teaching model’ delaying formal teaching of reading, using the early school years to develop executive function and creativity, using natural learning and apps to scaffold classroom and reading readiness … and to underpin the development of the 21st century skills needed for international competitiveness
Summary and Conclusions
The agenda for Positive Dyslexia...

- **DNC**
  - Classroom Readiness
  - Executive Function
- **21st Century Strengths**
  - Talent Diversity
- **How to Build Movement?**
- **Why Weaknesses?**
- **What Strengths?**
- **Why Commitment**
- **Delayed Neural Commitment**
- **Dyslexia Decathlon**
- **Positive Dyslexia**
- **How to Rebrand?**
Building the Movement

• Empower everyone to use their skills!  
  5-10% of population, major skills…

• Get the new angles…
  The ShowBook
  Apps
  Something for everyone!

• Exploit the Rebranding
  21st Century Skills
  Talent Diversity
  Make and Use Friends in High Places

• Build from the Grass Roots
The **ShowBook**

1. book as threat to dyslexic reader
2. ebook as ‘Horseless Carriage’
3. completely new approach
   - Advantages of Books
   - Advantages of Demonstrations
   - Available on iBook store for iPad and Mac
4. Can watch, dip in, read the Show as you wish
5. Advantage of dyslexia-friendly design - better for everyone.
Conclusions: Powerful Ideas

Positive Dyslexia
Dyslexia Decathlon
Delayed Neural Commitment
SPIN
Talent Diversity
Learned Toxicity
Classroom Readiness
Natural Learning
The ShowBook

Use dyslexia to improve the systems for everyone!
Why Now?

1. First wave (disability awareness) completed
   - Awareness
   - Legislation
   - Representative bodies

2. The Science is right
   - Positive Psychology
   - Work Psychology
   - Individual Psychology

3. Tools are there
   - Social Media
   - Apps
   - The knowledge economy
Why You!?

1. A movement builds from the grass-roots.
2. Parents, educators, dyslexia researchers and dyslexia advocates have the opportunity to make a difference for the next generation.
3. New technologies allow the combination of individual and social developments.
4. The EDA and BDA are well placed to help co-ordinate and lead this initiative.

There is much to be done!
Together we can help dyslexics find and follow their stars!
Positive Dyslexia is a movement that I started with Thomas West and Brock Eide in 2012. Its aim is to rectify the current emphasis on dyslexia as a disability by focusing on the strengths and the advantages of dyslexia. My book and iBook, Positive Dyslexia, provides the background to Positive Dyslexia while introducing the completely new idea of the 'ShowBook' - a book that can be read in the conventional way, or may be used as a 'Show' to present the concepts through speech and animated diagrams. I did it this way to be helpful to dyslexic users, but everyone finds it much more motivating. Click on the links below to download the free flyer or the free intro, or to purchase the standard book on the Amazon website.

On the right is the traditional book form. Available from Amazon and other good booksellers. Click on the thumbnail to go to the corresponding web page.

This is the free 'Six Minute Flyer' for the ShowBook. Clicking on the icon takes you to the Flyer information. The Flyer explains the background to the ShowBook concept, and how designing it for dyslexic users has transformed the accessibility for everyone. The Overview (below) is also free, and explains the 7 Acts, from the Strengths of Dyslexia, the Cause of Dyslexia, the cause of Reading Disability, then how to thrive in School, Work and Society. I develop the strong position that Talent Diversity is the key concept for a society to succeed, and dyslexic employees are a major resource for Talent Diversity.