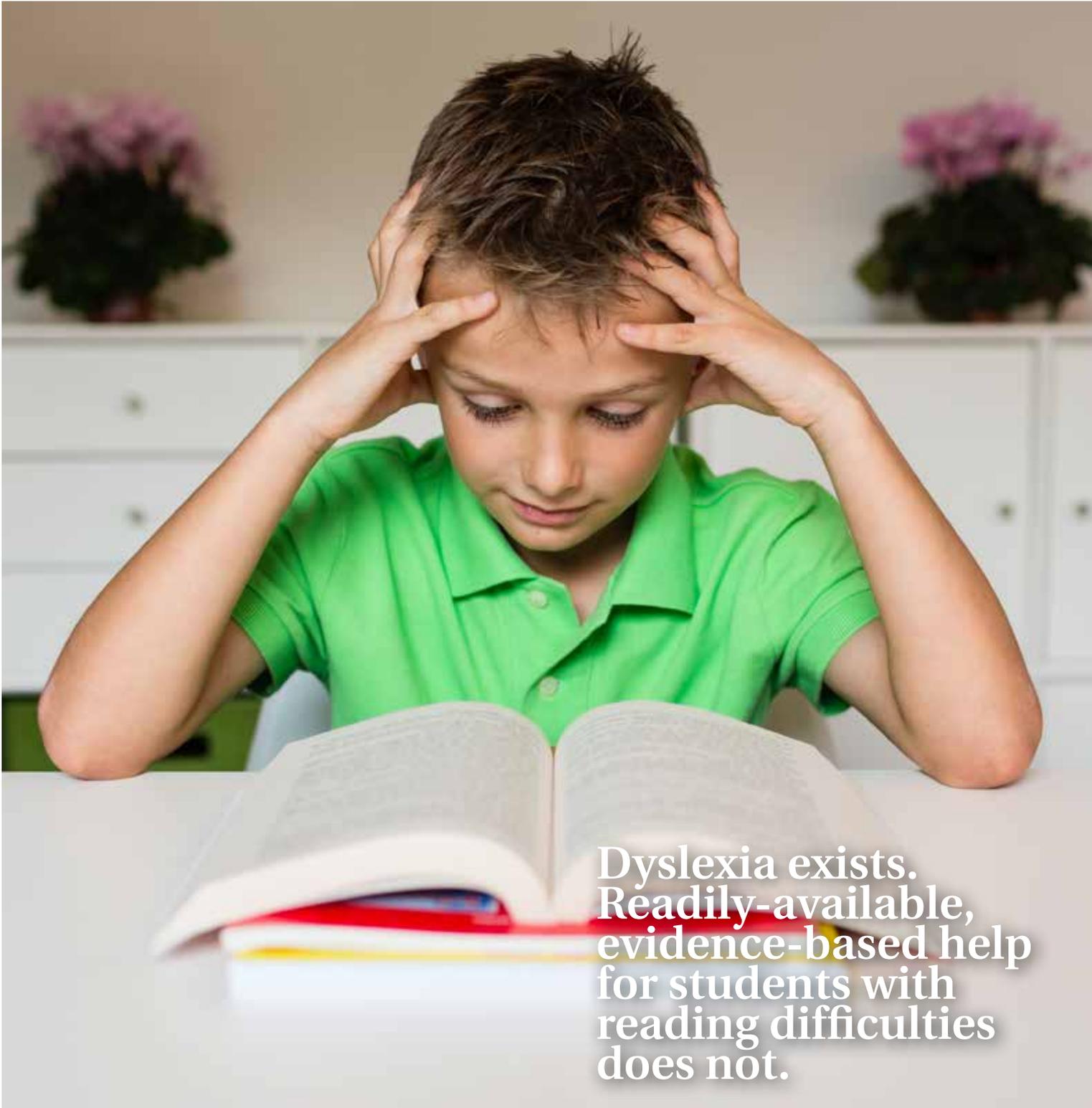


# Bulletin



Dyslexia exists.  
Readily-available,  
evidence-based help  
for students with  
reading difficulties  
does not.

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**LDA MISSION**

Learning Difficulties Australia is an association of teachers and other professionals dedicated to assisting students with learning difficulties through effective teaching practices based on scientific research, both in the classroom and through individualised instruction.

**THE BULLETIN**

The Bulletin is produced by the publications committee of Learning Difficulties Australia. Members of the committee are Wendy Moore, Alison McMurtrie, Nicole Todd, Roslyn Neilson and Molly de Lemos. We welcome the submission of articles from LDA members and others with an interest in learning difficulties for possible inclusion in upcoming editions of this Bulletin.

Please submit articles, correspondence about the Bulletin, or letters for publication to the editor ([wordsforlearning@gmail.com](mailto:wordsforlearning@gmail.com)). For questions about content, deadlines, length or style, please contact the editor. Articles in the Bulletin do not necessarily reflect the opinions nor carry the endorsement of Learning Difficulties Australia. Requests to reprint articles from the Bulletin should be addressed to the editor.

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# From the President

## Dr Lorraine Hammond

When I met Professor Maryanne Wolf in Brisbane, on the eve of her first event for LDA last month, she greeted me with a request: "Now Lorraine, I need to talk to that journalist, you know the one, from your national broadcaster... he interviewed me before."

As a devotee of *ABC Radio National*, I felt up for the challenge. Maryanne has spoken a number of times on *Radio National*, in 2002 to Dr Norman Swan and in 2008 to Phillip Adams, but I guessed it was Norman Swan she had in her sights. I remember listening to his [spirited interview](#) with Maryanne about reading disability as a major health problem when I was in the final stages of writing my PhD thesis. I wanted to cheer from my study as Maryanne set about debunking every myth that underpinned the Whole Language approach to reading instruction that was commonplace in Australian schools at the time.

So at Maryanne's prompting I emailed *The Health Report*. Maryanne was whisked into the Sydney ABC studios and I was listening to her [interview](#) on my drive home from work three days later. Maryanne is a force to be reckoned with and she is championing the need for evidence based reading instruction. Over 1000 people attended professional learning sessions in Brisbane, Sydney and Melbourne and Maryanne's key messages were clear:

*"Learning to read is not natural; rather it is an added extra that is painstakingly bolted on, most efficiently and effectively with systematic and explicit instruction."*  
*"Phoneme awareness and rapid automatised naming processes are the best predictors of reading failure."*

*"Children need explicit, systematic and multiple exposures (at least 100 for dyslexics) to learn letter-sound relationships."*

*"Deep reading is not surfing the web, skimming text."*

It was difficult typing the last line while trying to wrestle my son's iPad off him. Maryanne's commentary on the expense of the digital age on children's reading habits resonated strongly with me.

Phillip Adams' (2008) opening comments to Maryanne will be understood by those who have heard her speak: "You are a very loveable guest – I already adore you!" If you were able to attend one of Maryanne's presentations, I thank you for supporting LDA professional learning. It was marvellous to meet so many LDA members, and I encourage you to revisit and share Maryanne's podcast interviews with those who might benefit from listening to them.

Learning Difficulties Australia is committed to providing quality professional learning that not only increases teacher knowledge but focuses attention on the imperative for evidence based reading instruction in Australia. Professor Maryanne Wolf's visit follows on from that of Dr Louisa Moats who delivered an equally sobering message: too many individuals fail to learn to read because they don't receive the right instruction.

In addition to those international researchers whose work emphasises the work that needs to be done in the name of effective literacy and numeracy instruction, LDA offers more 'grassroots' professional learning from local academics and teachers who can demonstrate at a classroom level what this should look like. I welcome our new Council members, all of whom are committed to promoting evidence based practice and who volunteer their time to support LDA.

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*LDA's president, Dr Lorraine Hammond, is a senior lecturer at Edith Cowan University. She has a particular interest in preventing literacy based learning difficulties. Lorraine lectures in Direct Instruction and Learning Difficulties and is currently conducting research on Explicit Instruction.*



# Raising Dyslexia Awareness in Australia

By **Jen Cross** and  
**Tanya Forbes**

Over the past few years, the momentum for dyslexia advocacy has increased significantly. There are now thousands of parents and educators nationwide who are committed to creating change by raising awareness in order to empower students with dyslexia in schools nationwide. This groundswell has a common vision: to see both the National Inquiry into the Teaching of Literacy and the National Dyslexia Working Party recommendations implemented in every school. We are actively involved in driving and promoting three national campaigns:

## Light it Red for Dyslexia – Saturday 15th October 2016

*Light it Red for Dyslexia* was inspired by *World Dyslexia Day*<sup>1</sup>, a dyslexia awareness event held on 15th October

in the USA. Those supporting World Dyslexia Day wear red, and landmark buildings are illuminated red to raise dyslexia awareness. The date of the 15th was selected to represent the 1 in 5 people considered to be on the dyslexia continuum. The colour red was chosen to symbolize the dreaded RED pen used to correct their work. Students with dyslexia usually see red pen in a negative context on their school work and exam papers. By reclaiming the colour red in a positive light, it is hoped to empower people with dyslexia.

After reading an article about World Dyslexia Day, we were inspired to start our own dyslexia awareness campaign here in Australia to coincide with the international event by lighting up Australian monuments and buildings in red on 15th October. Dyslexia support groups around Australia collaboratively banded together and organised the very first 'Light it Red for Dyslexia' in just a few short weeks in 2015. It was a mammoth feat!! Not only were some amazing iconic Australian buildings and monuments lit up in red, but many of the dyslexia support groups hosted gatherings at some of these sites on the night.

The passionate support group volunteers included those from Dyslexia Support Australia, Dyslexia NSW Support



Group, Dyslexia Victoria Support, Dyslexia QLD-Gold Coast Group, Dyslexia Support South Australia, Western Australia and Perth Dyslexia Support Group, Square Pegs Dyslexia Support Tasmania and Dyslexia Information for the Canberra Region-Community Group. Our sincere thanks to facility managers at the following locations for supporting Dyslexia Awareness in 2016:

**NSW:** Sydney Town Hall, the Big Banana (Coffs Harbour), the NSW State Library (Sydney), Yamba Lighthouse, Monaro Street (Queanbeyan), Luna Park (Sydney), Tacking Point Lighthouse (Port Macquarie), Newcastle Clock Tower, Luminous at Darling Quarter, Darling Harbour (Sydney), Goulburn, Wollongong Lighthouse and the Museum/City Library courtyard and fountain (Orange).

**VIC:** Melbourne Star Observation Wheel, Kingston Clock Face (Moorabbin), Ballarat Town Hall clock face, Central Deborah Poppet head (Bendigo), Girton Grammar Naunton Family Building (Bendigo), Geelong Waterfront structures 4. Deakin University Waterfront and the High Street Water Tower (Wodonga)

**QLD:** Brisbane Story Bridge and SkyPoint Observation Deck - Q1 Building (Surfers Paradise)

**SA:** Jetty Road (Glenelg), King Street Bridge (Glenelg), Tonsley Campus of Flinders University (Clovelly Park), Adelaide Town Hall balcony, Gustav and his dog monument (Eudunda), Gawler Town Hall & Institute Building (Gawler), City of Playford Main North Road (Elizabeth), Parliament House (Adelaide), City of Salisbury monuments and War Memorial (Mallala).



Light it Red 2016 Port Macquarie

WA: Perth Bell Tower, Elizabeth Quay (Perth), Brookfield Place (Perth) and Wellard Oval (Kwinana)

**TAS:** Elizabeth Street Mall (Hobart), Wrest Point (Hobart)

**ACT:** Telstra Tower, National Carillon, Royal Australian Mint and Old Parliament House

**NT:** Darwin Convention Centre

In addition to the wonderful support we have received from the facility managers of iconic buildings and monuments across Australia, we have appreciated the encouragement and support from other associations including Learning Difficulties Australia, the various SPELD associations, the Australian Dyslexia Association, LD Network, the Dyslexia Empowerment Week organisers,



Light it Red 2016 Canberra



Light it Red 2016 Adelaide



Light it Red 2016 Perth

Outside the Square, Learning & Literacy Language Centre, Read2Write, the various national Dyslexia Support Groups and Spruik Designs.

For further information about Light it Red for Dyslexia, please refer to the following social media platforms:

Facebook: [www.facebook.com/lightitredfordyslexia/](http://www.facebook.com/lightitredfordyslexia/)

Instagram: [www.instagram.com/lightitredfordyslexia/](http://www.instagram.com/lightitredfordyslexia/)

Twitter: [twitter.com/LiRed4Dyslexia](https://twitter.com/LiRed4Dyslexia)

Twibbon: [twibbon.com/support/light-it-red-for-dyslexia](http://twibbon.com/support/light-it-red-for-dyslexia)

### Dyslexia Empowerment Week – Sunday 16th – Saturday 22nd October 2016

Dyslexia Empowerment Week is now in its fourth year. This national event was created to increase awareness of dyslexia, with many events and activities organised across the country.

The theme of Dyslexia Empowerment Week for 2016 was *Rethink Dyslexia*. We wanted to move away from concentrating on the difficulties and struggles of those with dyslexia by highlighting their strength and talents. *Rethinking Dyslexia* also provides an opportunity to challenge the many myths and misconceptions that surround dyslexia.

On the Dyslexia Empowerment Week website there were special community events, suggested activities for schools and awareness posters that could be downloaded. For more information, please visit the website:

[dyslexiaempowermentweek.com.au](http://dyslexiaempowermentweek.com.au)

## Make it a Red Letter Day competition – 1st September – 22nd October

The *Make it a Red Letter Day* competition coincided with *Light it Red* and *Dyslexia Empowerment Week*. Entrants between 5 and 18 years of age were encouraged to produce a 'red letter' about dyslexia and send it to a politician, school principal, teacher, media organisation or any other person or group that they felt might influence change. The letter could be in any format (written, audio, video or digital) and entrants were encouraged not to use spelling or grammar checking options. There were over \$10 000 worth of donated prizes including a Sailors with DisABILITY Sydney Harbour Sailing package, an iPad Air, C Pen Scanner and Reading Pens, Literacy packages and Assistive Technology software.

Some very powerful and influential *red letters* have already been published on the website: [www.myredletter.com.au/](http://www.myredletter.com.au/)

Award-winning Australian author, Children's Laureate and dyslexia ambassador, Jackie French, is this year's judge. She will be looking for heartfelt, honest, inspiring and creative Red Letters. The winner will be announced on 31 October and published on the website after this.

<sup>1</sup> <http://christieaitken.blogspot.com.au/2014/09/from-seeing-red-to-redeeming-red.html?m=1>

*Jen Cross has a 16 year old son with dyslexia. She founded the Facebook page 'Dyslexia Information for the Canberra Region'. She developed an A.C.T. petition for dyslexia identification and support in 2012, and was a*

*representative on the Taskforce on Students for Learning Difficulties from 2012 to 2014. Jen advocates for and shares evidence-based information for those affected by dyslexia. She is studying Education Support at Canberra Institute of Technology.*

*Tanya Forbes is an LDA Council member, dyslexia advocate and education campaigner. She is the creator of the documentary film *Outside the Square* and is the founder of the Gold Coast Dyslexia Support Group. She is committed to closing the research to practice gap in our education system and has been working closely with local schools in her area to promote evidence-based practice.*



Light it Red 2016 Darwin

# LDA Annual General Meeting and Awards Presentation

The Annual General Meeting for LDA was held on Saturday September 10th at the Treacy Conference Centre in Melbourne. As is usual practice, the AGM was preceded by a Council meeting where all of the new members were able to meet face to face to plan for the year ahead.

We are very sad to be saying farewell to three Council members, and particularly acknowledge the hard work of Alison Clarke, Diane Barwood and Alison McMurtrie. Alison Clarke maintained a strong presence in the media in her role as Vice President. Her assistance in securing and managing the professional learning session at the Collingwood Town Hall is gratefully acknowledged. Diane Barwood has had a long association with LDA and has been a member of Council on and off for many years. Diane was co-opted to return to assist with Consultant matters and we thank her for her contribution. Finally, Alison McMurtrie played a significant role as Secretary of LDA for the last four years. The role of Secretary is the glue that keeps LDA together and Alison also took on a significant role with Publications. We are in her debt.

At the AGM, LDA President Lorraine Hammond presented an outline of the workings of LDA. She commented that there was “no better time to be part of LDA”. We have seen a significant increase in memberships, the last two international speakers (Dr Louisa Moats and Professor Maryanne Wolf) have reached audiences of over 2000 participants in different parts of Australia, and LDA’s partnership with

organisations such as Five From Five demonstrates our commitment to the provision of evidence-based professional learning and advice to teachers and other related professionals supporting individuals with learning difficulties.

LDA has also welcomed a new editorial team to the *Australian Journal of Learning Difficulties* in Dr Sarah McDonagh and Dr Lisa Limbrick. Sarah and Lisa are very keen to work with LDA Council to take the Journal to a new readership and attract more international and influential contributors. Further, LDA has been working hard with BOSTES in NSW to have our professional learning endorsed by the Board of Studies. Particular thanks are due to Dr Pye Twaddell, Alison McMurtrie and Dr Lorraine Hammond for their efforts with this project.

Treasurer Pye Twaddell then gave the financial report. We thank her for her diligent attention to ensuring that LDA retains its viability through careful financial monitoring and management.

Daryl Greaves was awarded Life Membership of LDA. Although he was unable to attend the AGM, a brief history of Daryl’s contribution to the organisation, written by Diane Barwood, will be published in the next edition of the Bulletin.

It was terrific to meet those members who attended. We are grateful for members’ support and pleased that so many of you were able to come and listen to the recipients of this year’s awards. We thank all of our members for their support and commitment to the important work of LDA.

## Awards for 2016

At the conclusion of the AGM, LDA’s annual awards ceremony began.

The Mona Tobias Award was presented to Dr Roslyn Neilson for her significant contribution to research and practice in the area of learning difficulties, particularly in the area of



Lorraine Hammond with Maryanne Wolf at the LDA AGM and awards ceremony

reading. Ros, a former member of LDA Council, read a poem written by Mona Tobias, her award’s namesake. Ros then considered how her own work, which has included significant and influential contributions in the assessment of phonological awareness, could be understood in terms of Mona Tobias’s philosophies about teaching. Ros continues to contribute to the work of LDA by writing for and reviewing articles for the Bulletin.

The Bruce Wicking Award was presented to Lynne Ivcevic who co-ordinates PROPEL, a programme at John Curtin College of the Arts in Fremantle WA, that supports students with learning differences, including many students who are ‘twice exceptional’. Many students who might otherwise have been unsuccessful at high school have taken part in PROPEL, and have been accepted into prestigious universities overseas as well as locally in Australia.

Alex Lazari, representing Routledge, presented the LDA Eminent Researcher Award to Professor Maryanne Wolf. Maryanne spoke about how she came to be concerned about students with literacy based learning difficulties after a placement in Hawaii as an English teacher. In this first year of teaching Maryanne came to realise the impact that not learning how to read had on

children's lives. She resolved to find out how the brain learns how to read, and how best to teach reading.

## LDA Council 2016-2017

Learning Difficulties Australia has the following Council members for 2016-2017.

### LDA Executive office bearers

- President: Dr Lorraine Hammond
- Vice-President: Tanya Forbes
- Vice-President: Jan Roberts
- Treasurer: Dr Pye Twaddell
- Secretary: Pam Judge

### LDA Council members

- Professor Pamela Snow
- Dr Nicole-Ann Todd
- Jo Whithear
- Professor Anne Castles
- Tanya Forbes
- Kristin Anthian
- Dr Wendy Moore
- Lisa Ridings
- Dr Bartek Rajkowski
- Ann Ryan

### Co-opted Council member

- Meredith Davies

The AGM each year is a time for renewal and we welcome the following new Council members.

**Dr Bartek Rajkowski (SA):** Bartek is a speech and language pathologist with extensive experience in assessing, identifying and helping students with literacy difficulties. He has been the principal clinician and director of Adelaide Speech Pathology Services since 2001, where he leads a team of passionate clinicians all of whom have a special interest in literacy difficulties. Bartek is also the creator and managing director of Reading Doctor Software, a suite of interactive software and apps designed to improve skills known to be fundamental in reading acquisition. Bartek completed his doctoral research in 2012 on the potential causes of phonological processing difficulties, which are common in children with poor reading. Bartek delivers very successful PD around the country to teachers, speech pathologists and parents, supporting evidence-based literacy practices.

**Lisa Ridings (NSW):** Lisa is currently employed at the Association of Independent Schools NSW (AISNSW) as the Senior Assistant Division Head in the Student Services division. This role primarily involves supporting

schools with enhancing whole class instruction to ensure the needs of all students are met; specialised student support; and assistance with the interpretation of legislative requirements for schools. Her role also involves the coordination of Commonwealth and State funded projects focused on literacy and numeracy.

A particular focus of this role is to assist teachers to make informed decisions based on merging ideas drawn from both research and practical experience so as to design effective and systematic instruction that meets the needs of students. Lisa also provides support to schools through the provision of professional learning as well as ongoing mentoring for teachers in evaluating programs and interventions.

In 2010 Lisa completed the Graduate Certificate of Education (Learning Difficulties) at Edith Cowan University. Having the opportunity to learn from extremely motivating and inspiring University educators, she chose to pursue her professional research interests through further postgraduate studies. As a recipient of a partial scholarship from the Fogarty Foundation, throughout 2011 – 2012 she completed a Master of Education (Special Education).

**Ann Ryan (Vic):** Ann Ryan has been a member of LDA (previously AREA) for close to twenty years; she delivered a paper at the 1999 AREA Conference Advocacy and Action, Brisbane, later published in the conference book, Advocacy and Action. Since 2004, as a consultant tutor member of LDA, Ann regularly visits schools, liaises with related service providers and is very active in promoting the practices and principles of LDA throughout her region. She offers professional support for teachers, promotes evidence-based programs and delivers parent workshops.

Ann started her teaching career in early years classrooms and following the diagnosis of her son with autism in 1989, she became a passionate advocate for the needs of struggling learners and their families. Her long and varied teaching career in schools has included work in mainstream primary and secondary schools, specialist schools and adult education as classroom teacher, special education co-ordinator and principal. Currently Ann is the Director of Ely Education, a specialist tuition centre based in Wangaratta, supporting students with additional learning needs.

**Co-opted Member Meredith Davies:**

During the years 1973 and 2009,

as a teacher with the Department of Education, Meredith worked at Melbourne metropolitan Primary and Special Education Schools, and Victorian country settings. Meredith currently has her own educational consultancy business, in which she works privately with students, schools and families on a one on one basis. She specializes in the diagnosis of student learning difficulties, and the development of learning programs in which she teaches explicitly to help overcome student difficulties. She also trains volunteers as part of the EdConnect Program, a not for profit organization which trains, places and supports volunteers to work with students in school, fostering positive learning and mentoring.

# In conversation with Maryanne Wolf

Bulletin editor **Wendy Moore** spoke to Professor **Maryanne Wolf** at the conclusion of her recent Australian tour.

**Wendy:** *We have been so lucky to have you visit us in Australia, and I really enjoyed the talk you gave us today at the Collingwood Town Hall. You said that you were keen to get your message out to those who couldn't make it to your sessions, so thank you for sharing your thoughts with me today. I'd like to ask you about advocacy first. There is a palpable sense of both potential and frustration for groups working to change the way our institutions support students with a whole range of learning difficulties including dyslexia. What would be your message to these groups, and to the policy makers that they work hard to influence?*

**Maryanne:** Even though I have only been here two weeks, I have been bombarded by the frustrations of parents, teachers, principals and even policy makers about the gap between what we know in research and what is being done for children in Australia. If I could wave a magic wand, I would create a national campaign in which all of the groups do several events as soon as possible, and have simultaneous, public relations efforts in newspaper outlets, in blogs, in conferences – especially conferences – involving principals and policy makers. Change has to involve both the ground level with parents and teachers, but also the levels of administration and policy change.

A major issue is how to reach those who are in leadership roles. When I was in Sydney, there was something called the Leadership Development Day. They had

me come in to talk to principals, especially young aspiring principals. I thought that this was a really wise kind of intervention. It would be wonderful to do that in every state so that the young principals get more and better information. The problems that I see are as much about ignorance about what works, as about adherence to the binary ways of the past. Both of these problems, however, have to be addressed. To combat the ignorance, a campaign for children with learning challenges in Australia would stress the knowledge base we already possess in the US, and that is used in some parts of Australia, thanks to LDA. Various people, from parents, teachers to political leaders and media, would be involved, and paediatricians as well.

But when it comes to the breaking down of previous binary ways of thinking and teaching, this to me is the largest and most difficult problem, because it is has been entrenched for almost half a century. The history of the debate over reading methods is an interesting one; one of my teachers at the Harvard Reading Lab, Jeanne Chall, wrote the book *The Great Debate*. She once told me that she had amassed all the data available in the world at that time on the subject and that it was totally clear that explicit instruction in decoding principles was overwhelmingly better for most children. Nevertheless, she went on to say, within five years the pendulum will swing back to whole language for two reasons: first, because it has become something of a religion to people instructed in it; and second, because there is always a regression to the comfortable mean. The regression to the mean (i.e., how teachers were first taught) is a particularly insidious and difficult problem, because so often wonderfully well intentioned idealistic young teachers were taught by their teachers in Schools of Education that to allow the child to be creative and to love reading means that their task is to immerse the child in the beauties of literature, rather than helping them learn how to read so that they can become immersed. The result is that you have this very odd, even politically weighted, axis: people have been taught



that to adopt whole language methods is to be imaginative, creative, and politically progressive; and that phonics methods (using explicit instruction) are destructive to creativity and politically reactionary. Indeed many whole language instructors assume that phonics is synonymous with kill and drill and worksheets. The tragic result of this unnatural dichotomy is that many young idealist teachers are in complete ignorance about what explicit instruction really involves, which from my standpoint is the teaching of the first parts of the reading brain circuit.

To this very moment, in many parts of Australia creativity is associated with whole language, rather than the more complex reality: that creativity is part of a whole circuit of processes, each of which children have to learn if they are to climb up those early rungs of reading. Strategically, it was politically brilliant for the founders of whole language methods to associate left, progressive, imaginative thinking with their methods; while right-wing, kill and drill methods were associated by them with explicit instruction. But from the standpoint of research and many children's future potential, it couldn't have been a more egregious error. From my perspective as a reading brain researcher, this false dichotomy was the most destructive error in twentieth century education.

**Wendy:** *We are often reminded of the crucial place of play in a child's development, and warned about the dangers of a 'push-down' curriculum that focuses on academic skills such as reading too early. What are your thoughts on this issue?*

**Maryanne:** There should be no binary conceptualization of play and learning; in fact, the opposite. Learning should be playful. It should be full of excitement! I often use the term courtship of language to describe a great deal of what we do as teachers of reading. Whether we call it child's play or word play, all of this is learning the most important precursors to reading, but it's whimsical learning, it's playful learning, it's engaging learning. The idea that learning has to be this almost catatonic ingraining of knowledge instead of working with the child's imagination to make play and learning come together, that's another piece of this horrible bifurcation between learning and joy or between implicit and explicit methods. Learning to decode is not kill and drill, because learning to read is joy. The idea that learning something difficult like the letter-sound correspondence rules is not joy, or is not playful, is a piece of the ill-conceptualisation of what reading acquisition should be.

I need to say a few more things about play and early reading. First, and perhaps surprisingly, I worry that there can actually be too much emphasis on reading in terms of the curriculum in Kindergarten. In the States I have seen that too often on the backs of Kindergarten children are placed the aspirations of principals for good test results in the third grade. There are some children, especially boys, who are developing more slowly. The idea that they should be pushed to decode as soon as possible can actually cause reading problems that would not have emerged if given more time. So we've got several possible things going on that are converging into a perfect storm in which things can go wrong for two very different reasons.

There should always be a very careful look at how much time should be given to certain children, particularly young boys. Towards that end, teachers need to be familiar with the tools of early diagnosis and how to apply that knowledge to an understanding of what different children need. Early prediction batteries are tremendously important, because there is no 'one-size-fits-all' for any child. Our most recent work on prediction shows that in Kindergarten we can predict six different subtypes of future readers. Of these, there are at least three types of readers with differing dyslexia profiles, and they will need different emphases over time. This is fantastic information that will then help us target specific forms of instruction and intervention. Teachers need a toolbox of knowledge about what kinds of instruction are best for which children.

**Wendy:** *Are there students for whom functional literacy really is too*

*demanding a goal? Is there a point at which these students spend so much of their time and energy learning to read and spell that no time is left for the things they really care about, are good at, or love to do?*

**Maryanne:** No! I think functional literacy is a right for every human who has the intellectual ability to do so. Literacy should be the most basic goal for the entire world. Both the UN and Pope Francis view literacy as a civic right. That doesn't mean that there aren't some children with certain intellectual challenges who can't learn to read. But there are children who - against all predictions - do learn to read. Once again, we must know our children, and we must view literacy as a basic human right.

**Wendy:** *Working with adolescents, and attempting to foster an appreciation of literature, can be a challenging task. 'Why', they often ask, 'can't we just save time and watch the movie?' Will literature - by which I mean specifically novels, poetry and essays - become a dwindling and specialist interest?*

**Maryanne:** The demise of the book has been heralded for the last two centuries. And it still exists, just as radio still exists, despite being assigned to the garbage heap by many over many years. Expert reading requires some of our most sophisticated thought processes, some of which are shared with the visual medium in film, but some of which are unique to both. But what is different about reading is that it allows a very beautiful pause, and the ability to go back, the recursive dimension that film does not possess in the same way. Within this pause the reader is invited to think at levels of depth and meaning and richness that a film often isn't able to provide. But film provides something else. It would be a paler world without the visual imagery that good film gives us. But it would be a less deep thinking world if the opportunity for true reflection and novel thought that is the gift of deep reading would diminish or atrophy.

Novelists are particularly worried about this possibility. Some of my friends are novelists: Gish Jen, Chinese American novelist; Allegra Goodman, another wonderful novelist; Jayne Smiley, another. In their perspective, it's not so much that the novel will die, but rather that it could be sidelined, as it is given less precedence. And with that will be a far greater, more insidious and invisible demise, which is the ability to be transported, to pass over from ourselves to others. There's an identification process that happens with time - over time - inside a novel. That instantaneous

identification in film can give us a sense of it, but never for as long as we receive in a novel. I actually hate the very thought that we would ever replace one with the other. They both enrich us daily!

But I want to return to what Jane Smiley meant about the sidelining of the novel, and why such a scenario would be so dangerous. She felt that people would begin to lose the understanding of 'other'. This is no ordinary loss. In this loss we would be governed by people who never truly understood what it means to be another person: in their shoes, in their poverty, in their despair, in their disappointment. If the novel had not entered their souls, if you will, or given them this ever-deeper understanding of who other people are, Smiley believed that we could someday be governed by people who really don't know others, only themselves. I do not want to comment on the political implications of this thought in the climate of the current American election.

Part of this concern is related to the fact that the digital culture encourages such vast amounts of information that people default to ever narrowed sources of information that confirms what they think. In other words, with such a glut of information and communication available, you end up only reading and doing blogs and communications with those who think just like you. The paradox here is too much information can mean too little knowledge and critical analytical thought by us.

**Wendy:** *You are fascinated by the potential of technology to change the brain in new and perhaps yet unknown ways. So should we be putting laptops into primary school classrooms?*

**Maryanne:** It's a complicated and very difficult question. I've worked on that in the book *Tales of Literacy for the 21st Century*, but I'm also working at it even more systematically in the next book, *Letters to a Good Reader*. With that book I am attempting to provide a proposal for the ideal young reader from zero to ten years in a digital culture. My hope within that trajectory is to depict a childhood in which the child will have very little technology before two years old; gradual introduction of technology from two to five years; coding and programming beginning at five and six years old; and reading being introduced through print from the start. Through a gradual transition, the child would receive explicit instruction not only in reading print in physical form, but also in how to read on a screen. By ten, I hope a beautiful, flexible, informed bi-literate brain will emerge for the children of Australia and around the world.

# Book Review: Tales of literacy for the 21st century

**Reviewer: Peter Westwood,**  
education consultant and  
freelance writer

*Maryanne Wolf (with Stephanie Gottwald). (2016). Oxford & New York: Oxford University Press. Paperback. 200 pages. ISBN 978-0-19-872417-9. Price: (British) £10.49*

**T**ales of literacy for the 21st century is a monograph published by Oxford University Press within *The literary agenda* series (series editor Philip Davis). These texts aim to explore the state of literacy and address the importance of being literate in today's world. Other titles in the series can be found on the OUP website.

In this book there are seven chapters plus an epilogue. A selected bibliography is provided for those who wish to explore issues in more depth, and each chapter is well referenced. This work is an important contribution to the field of education and deserves to be read by all teachers of literacy and, most importantly, by teacher educators.

The overarching theme of Maryanne Wolf's book is what it means to be literate and how the process of becoming literate changes the functioning of the human brain. She also addresses the disadvantages that accrue for those who are not literate. In addition, the writer considers what positive and negative effects our current digital culture is having on the reading brain, and how technology might be used to reach and teach those who are most disadvantaged.

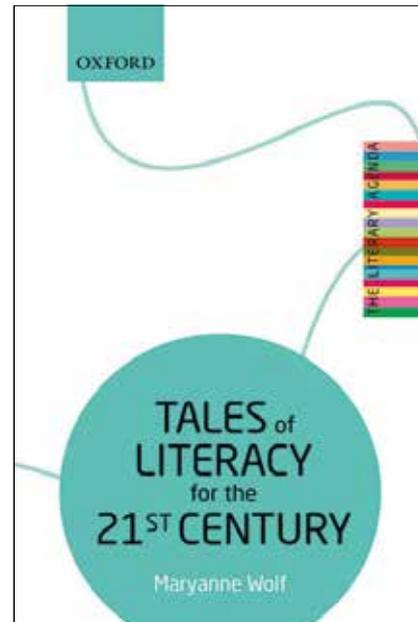
Anyone who reads this book will be left in no doubt concerning Maryanne

Wolf's admirable intellect, and her depth of contemporary knowledge in the domains of linguistics, psycholinguistics, cognition, human development, neuroscience, education, modern technology, and the world of literature. In this book she has integrated information from these diverse domains to, in her words, '... shed light on how literacy develops; what happens when it does not; and how literacy transforms brain, mind and culture in highly significant, deeply consequential ways' (p.2). She considers how literacy can take us beyond ourselves and give us ideas that advance our thinking and learning.

In the introductory chapter, Wolf addresses such issues as how becoming literate actually changes the human brain, and how the digital age is further affecting literacy. She explains how reading deepens and expands our thinking and intelligence, '... as whatever we read becomes integrated with what is known, felt, inferred, hoped and imagined' (p.3) ... [and] '... the very process of becoming literate can contribute to the new reader's creativity, personal growth and critical thought' (p.10).

In Chapter 2, Wolf examines the linguistic precursors, components and correlates of reading ability. Naturally, she includes here the role of phonology and its connection to the phonetic writing system used in some languages. She also explains very clearly how awareness of syntax (the grammar of a language) and semantics (the meanings conveyed in a language) influences our thinking, communication and literary practices. The contribution of pragmatics (how language is used flexibly for various purposes within a culture) and orthography (the written language system) are also discussed here.

Some difficult concepts are covered in this chapter, but the writer explains and illustrates them very effectively, drawing on sources as varied as Lewis Carroll, Chaucer and Plato, as well as on the writings of recognized theorists and



researchers in linguistics such as Jean Berko Gleason and Noam Chomsky. Themes introduced in this chapter are developed in more detail in the next, where discussion takes account of young preschool children's exposure to everyday oral language and to stories read aloud to them, and how this experience of language prepares them for entry into reading. For example, Wolf suggests that the stories read aloud to young children are vitally important, because they not only enrich children's vocabulary and awareness of language sounds, rhythms and patterns but also foster their conceptual development. She writes: 'Understanding the complex language world of children's literature when being read to is a vital precursor to the comprehension of words and sentences in texts that children will later read independently' (p. 47).

The main focus of Chapter 3 is on the ways in which becoming literate can add greatly to a child's cognitive, linguistic and affective development. Children are greatly advantaged in families where literacy is valued and where language is used to converse and to encourage thinking. Children who are

raised in a non-literate environment, or without the opportunity to learn to read and write, are greatly disadvantaged. Wolf highlights the problems that are evident in family settings where literacy is not encouraged and language tends to be used in very restricted ways. She argues that the literacy gap that is all too evident in schools begins to develop from '... the very first day any child is born into a non-literate or semi-literate home' (p.39).

The writer indicates that where a child is born in the world largely determines whether he or she has the opportunity to become literate. She quotes the alarming fact that some 57 million children in the world are completely non-literate, most of them living in places where there are no schools and no opportunity to learn to read. However, even within developed countries a huge gap still exists between the 'haves' and 'have nots' in terms of opportunity to learn and the quality of education.

The final sections of this chapter begin to introduce new information on the manner in which the human brain develops and adapts specific neural circuitry for processing letters and words. Wolf describes research by Booth, and by Dehaene, indicating that literate persons, when processing language, activate areas of the brain that were not activated before they were literate; and at the same time new connections are made between language and visual attention systems. She writes: '... learning to read represents a new, expanded set of [neural] networks and new organizations for language itself' (p.60).

Chapter 4 takes a cognitive neuroscience (and almost evolutionary) perspective on 'the beautiful complexity of the reading act', and explores how 'words give shape and substance to our thoughts' (p.66). Here, Wolf begins not with the procedures that now epitomize neuroscience, but with the writings of Plato on the contribution of words to our knowledge making. The writer then skillfully links notions formulated so many years ago by Plato to the current states of research in brain function, brain localization, connectivity, synchronicity, and neuroplasticity. Current and past research is well reported here, with more than sixty relevant citations.

Again, readers will not find this chapter easy to process, indeed, it requires 'deep reading' but the material provides fascinating insights into the

cerebral and neuronal processes that are occurring when humans engage with text and build up their 'bank of semantic knowledge' (p.101).

In Chapter 5 we meet the 'deep reading brain'. Deep reading has been defined by other writers as an active and deliberate process of thoughtful reading that is carried out to enhance one's comprehension, appreciation, and learning from text. Wolf sees the use of imagery, perspective taking, background knowledge, analogical thought, metacognition, inferential abilities, critical analysis, novel thoughts and insight all operating in an interrelated way in deep reading. Again the writer interlaces characters and tales from literature, from Harry Potter to Kant and from Odysseus to Stephen Hawking, to enrich and illustrate the operation of these features of deep reading, and how they add to a reader's widening knowledge base. She writes that literacy changes the way that a person thinks, reads, reasons, and dreams. Such important opportunities are inevitably denied to the non-literate person.

Chapter 6 introduces us to the many challenges for literacy development that are emerging in this digital era, with children's ready access to digital devices from an early age. Wolf sets out to '... look first at the changing world of the young and their emergent capacities as they assimilate and adapt to a digital culture ...' (p.143).

An important issue addressed here is the effect that the use of technology has on human attention (the orienting system) compared with the role of attention in traditional reading of print. Many forms of digital and online materials require a constant switching of attention, as audio and visual presentations appear on screen, texts change, and hyperlinks are followed. This is far removed from the type of *sustained and focused attention* necessary for deep reading, self-monitoring and reflection. We may be seeing here a 'diminution of attention span'. Indeed, if a person tries to use this more fragmented type of attention when reading text in a book the result tends to be merely superficial learning. Wolf cites a number of recent studies indicating that reading and interacting with text on a screen (digital reading) produces quite different outcomes from reading sequential print in a book. Her worst fear is that the transition from a literacy-based culture to a digital one will result in readers losing the cognitive resources to read deeply.

In this chapter Wolf also addresses the problem of 'information overload' that technology has brought to learners. She writes: 'How the individual learns to approach and use this tsunami of information is critical, lest it become the impetus to reduce critical analysis rather than to promote it' (p. 153). Much of the information now presented on screen is in small bites that do not require careful thought; readers of digital text are required only to process it quickly rather than thoughtfully. She suggests that we (and by 'we' I assume she means teachers as well as researchers) need to be alert and responsive to the relative advantages and disadvantages of print and digital reading, so that we can maintain a better balance rather than abandon a print-based culture. Wolf argues for a 'bi-literacy agenda' that incorporates the best features of each medium.

The final chapter is titled 'A tale of hope for non-literate children', and it raises the possibilities of using relatively inexpensive mobile digital technology (a hand-held tablet) to help disadvantaged children gain literacy skills for themselves without human direction and instruction. A project implemented in Ethiopia by teams from Tufts Center for Reading and Language, MIT Media Lab and Georgia State University is described, using mobile digital pre-literacy and literacy apps with children who have no access to schooling. Many of these children had no previous exposure to symbolic text. The detailed descriptions of the project are clear, and they illustrate the adaptive steps needed in designing learning materials that can be used independently by children in this way. Wolf states that the issue now is whether this successful pilot study in Ethiopia can be replicated in other remote, war-torn or severely economically disadvantaged regions in any country. Studies to investigate this question have already commenced in India, South Africa and Peru, as well as some disadvantaged communities in USA. The ultimate aim is to develop 'an adaptive, dynamic, individualized learning system that promotes literacy development in multiple ways for all children...' (p.182). This is surely a noble intention.

As stated above, this book is not easy reading, but it will challenge your thinking as a teacher of literacy. Be prepared to apply here your own 'deep reading' strategies.

# Dyslexia and the Brain

## JUST THE FACTS... Information provided by The International Dyslexia Association

**R**esearchers are continually conducting studies to learn more about the causes of dyslexia, early identification of dyslexia, and the most effective treatments for dyslexia.

Developmental dyslexia is associated with difficulty in processing the orthography (the written form) and phonology (the sound structure) of language. As a way to understand the origin of these problems, neuroimaging studies have examined brain anatomy and function of people with and without dyslexia. These studies are also contributing to our understanding of the role of the brain in dyslexia, which can provide useful information for developing successful reading interventions and pinpointing certain genes that may also be involved.

### What is brain imaging?

A number of techniques are available to visualize brain anatomy and function. A commonly used tool is magnetic resonance imaging (MRI), which creates images that can reveal information about brain anatomy (e.g., the amount of gray and white matter, the integrity of white matter), brain metabolites (chemicals used in the brain for communication between brain cells), and brain function (where large pools of neurons are active). Functional MRI (fMRI) is based on the physiological principle that activity in the brain (where neurons are “firing”) is associated with an increase of blood flow to that specific part of the brain. The MRI signal bears indirect information about increases in blood flow. From this signal, researchers infer the location and amount of activity

that is associated with a task, such as reading single words, that the research participants are performing in the scanner. Data from these studies are typically collected on groups of people rather than individuals for research purposes only—not to diagnose individuals with dyslexia.

### Which brain areas are involved in reading?

Since reading is a cultural invention that arose after the evolution of modern humans, no single location within the brain serves as a reading center. Instead, brain regions that sub serve other functions, such as spoken language and object recognition, are redirected (rather than innately specified) for the purpose of reading (Dehaene & Cohen, 2007). Reading involves multiple cognitive processes, two of which have been of particular interest to researchers: 1) grapheme-phoneme mapping in which combinations of letters (graphemes) are mapped onto their corresponding sounds (phonemes) and the words are thus “decoded,” and 2) visual word form recognition for mapping of familiar words onto their mental representations. Together, these processes allow us to pronounce words and gain access to meaning. In accordance with these cognitive processes, studies in adults and children have demonstrated that reading is supported by a network of regions in the left hemisphere (Price, 2012), including the occipito-temporal, temporo-parietal, and inferior frontal cortices. The occipito-temporal cortex holds the “visual word form area.” Both the temporo-parietal and inferior frontal cortices play a role in phonological and semantic processing of words, with inferior frontal cortex also involved in the formation of speech sounds. These areas have been shown to change as we age (Turkeltaub, et al., 2003) and are altered in people with dyslexia (Richlan et al., 2011).

### What have brain images revealed about brain structure in dyslexia?

Evidence of a connection between dyslexia and the structure of the brain was first discovered by examining the anatomy of brains of deceased adults

who had dyslexia during their lifetimes.

The left-greater-than-right asymmetry typically seen in the left hemisphere temporal lobe (planum temporale) was not found in these brains (Galaburda & Kemper, 1979), and ectopias (a displacement of brain tissue to the surface of the brain) were noted (Galaburda, et al., 1985). Then investigators began to use MRI to search for structural images in the brains of research volunteers with and without dyslexia. Current imaging techniques have revealed less gray and white matter volume and altered white matter integrity in left hemisphere occipito-temporal and temporo-parietal areas. Researchers are still investigating how these findings are influenced by a person’s language and writing systems.

### What have brain images revealed about brain function in dyslexia?

Early functional studies were limited to adults because they employed invasive techniques that require radioactive materials. The field of human brain mapping greatly benefited from the invention of fMRI. fMRI does not require the use of radioactive tracers, so it is safe for children and adults and can be used repeatedly which facilitates longitudinal studies of development and intervention. First used to study dyslexia in 1996 (Eden et al., 1996), fMRI has since been widely used to study the brain’s role in reading and its components (phonology, orthography, and semantics). Studies from different countries have converged in findings of altered left-hemisphere areas (Richlan et al., 2011), including ventral occipito-temporal, temporo-parietal, and inferior frontal cortices (and their connections). Results of these studies confirm the universality of dyslexia across different world languages.

### What about genes, brain chemistry, and brain function?

Several genetic variants are associated with dyslexia, and their impact on the brain has been investigated in people and mice. Using animals that have been bred to have genes associated with dyslexia, researchers are investigating how these genes might affect development of and communication among brain regions

(Che, et al., 2014; Galaburda, et al., 2006). These investigations dove-tail with studies in humans. Differences in brain anatomy (Darki, et al., 2012; Meda et al., 2008) and brain function (Cope et al., 2012; Pintel et al., 2012) have been observed in people who carry dyslexia-associated genes, even those people who have good reading skills. In addition to these investigations at the anatomical, physiological, and molecular levels, researchers are trying to pinpoint the chemical connection to dyslexia. For example, brain metabolites that play a role in allowing neurons to communicate can be visualized using another MRI-based technique called spectroscopy. Several metabolites (for example, choline) are thought to be different in people with dyslexia (Pugh et al., 2014). Researchers continue to explore the connections between these findings and are hopeful that what they learn will help to determine the causes of dyslexia. This is a difficult aspect of research because differences in the brains of people with dyslexia are not necessarily the cause of their reading difficulties (for example, it could also be a consequence of reading less).

### Changes in Reading, Changes in the Brain

Brain imaging research has revealed anatomical and functional changes in typically developing readers as they learn to read (e.g. Turkeltaub et al., 2003), and in children and adults with dyslexia following effective reading instruction (Krafnick, et al., 2011; Eden et al., 2004). Such studies also shed light onto the brain-based differences of those children with dyslexia who benefit from reading instruction compared to those who fail to make gains (Davis et al., 2011; Odegard, et al., 2008). Neuroimaging data have also been used to predict long-term reading success for children with and without dyslexia (Hoeft et al., 2011).

### Cause versus Consequence

An important aspect of research on the brain and reading is to determine whether the findings are the cause or the consequence of dyslexia. Some of the brain regions known to be involved in dyslexia are also altered by learning to read, as demonstrated by comparisons of adults who were illiterate but then learned to read (Carreiras et al., 2009). Longitudinal studies in typical readers reveal anatomical changes with age, some of which are related to development (Giedd et al., 1999) and others to the firming up of language skills (Sowell et al., 2004) in correlation with improvements

in phonological skills (Lu et al., 2007). As such, researchers are teasing apart the brain-based differences that can be observed before children begin to learn to read from differences that may occur as a consequence of less reading by people with dyslexia. For example, researchers have found altered brain anatomy (Raschle, et al., 2011) and function (Raschle, et al., 2012) in pre-reading children with a family history of dyslexia. Future studies using longitudinal designs (i.e., long term), will inform the timeline of these changes and clarify cause and consequences of anatomical and functional differences in dyslexia.

### Summary

The role of the brain in developmental dyslexia has been studied in the context of brain anatomy, brain chemistry, and brain function—and in combination with interventions to improve reading and information about genetic influences. Together with results of behavioral studies, this information will help researchers to identify the causes of dyslexia, continue to explore early identification of dyslexia, and determine the best avenues for its treatment.

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Dyslexia exists.  
Readily-available,  
evidence-based  
help for students  
with reading  
difficulties  
does not.

**Bartek Rajkowski, PhD,**  
Speech & Language  
Pathologist



**“I was a broken child. It was my mum who pursued answers and even when I was identified as dyslexic, the teachers were not convinced dyslexia was even real. It’s hard to hear that it doesn’t exist when you are living with it every day. I couldn’t read, I couldn’t spell, I couldn’t write and I was in year six.”**

Lewis, 16, student with dyslexia.\*

**I** see kids like Lewis daily. I saw a new one recently. His name is Oliver. A week earlier, his teary mother had told me that he was causing chaos at school: uncontrollable in the classroom and constantly talking back at teachers. He had been internally suspended for a week for threatening to kill another kid. He’s nine years old. Yet, his mother says he has a heart of gold and she doesn’t know the person they are describing. She’s devastated. She feels like she’s lost her son. She doesn’t know what to do. She says his difficulties are a mystery to the school, and to her. She’s seeing a psychologist to deal with the stress. Another parent told her that Oliver might be dyslexic and that I may be able to help, but she wasn’t sure because she had also heard that dyslexia doesn’t exist.

When I first met Oliver we hit it off instantly. He was not what I’d expected based on the previous week’s description, even though I have spent 15 years helping hundreds of kids with reading difficulties. Oliver has a cheeky grin and a sense of humour as sharp as a tack. He has great language skills. We talked about how having reading and writing difficulties can make you feel stupid. I told him about what scientists have discovered: that smartness and reading skills are not closely related (Snowling & Hulme, 2011). You can be smart and struggle at school. You can also be less smart and read quickly. He smiled and raised his eyebrows.

“Really?” he asked. And so we began the long journey ahead.

Over the next few sessions, Oliver enthusiastically completed his language and literacy assessment. He tried hard and concentrated well, but his assessment revealed *profound* literacy difficulties. The impact on his self-esteem must be devastating. After a few more sessions I became confident that Oliver has *dyslexia*. The alphabetic code was a total mystery to him. So what is the alphabetic code, and why is it so difficult for students like Oliver?

### Written English: Cracking our alphabetic code

About 3000 years ago, the Phoenicians, an ancient people who lived in the area that is now the coastline of modern Lebanon, invented a radically new way of writing. In this new system, written language was represented by visual symbols that corresponded to the speech sounds, or *phonemes* of the language, rather than to units of meaning. This new *alphabetic* way of writing was a huge success and became the ancestor of almost all modern alphabetic languages, including English (Henry, 2009).

Since English is an alphabetic language, the letter patterns in the language are closely related to its *phonological* system. The phonological system of a language may be described as the underlying shared system of speech sounds that we use to convey meaning. Alphabetic languages rely on a process of converting this spoken, phonemic pattern into a visual, *orthographic* code when writing, and this code is then converted back to speech when reading.

In some alphabetic languages such as Finnish or Italian, every phoneme in the language has one corresponding *grapheme* (a grapheme is a letter or group of letters, such as ‘s’, or ‘oo’ in Figure 1, below). In English, however, the orthography is not quite as consistent. For example, we often keep the spelling of meaning patterns constant even when the pronunciation changes across words, like the ‘ed’ spelling of the past tense ending in ‘walked’, ‘warmed’ and ‘wanted’. English also respects the spelling patterns of other languages from which we borrow words. This all leads to variety in the way graphemes and phonemes correspond. Nevertheless, approximately 50% of English words can be spelt correctly with grapheme-phoneme conversions alone, and a further 36% of words have just one grapheme-phoneme inconsistency (Hanna, 1966). So, an understanding of the relationship between phonemes and letter patterns facilitates the “breaking of the code” in written language, since readers can work words out by sounding them out. This process is called *decoding*. It allows the reader to *teach themselves* unfamiliar words and gradually develop the accurate and automatic visual word recognition skills required for fluent reading (Share, 1999).

Decoding allows children to access the thousands of words they have already heard but never seen in written form. Decoding skills are crucial when reading unfamiliar regular words with consistent sound-symbol relationships (such as “representing” and “hippopotomonstrosesquippedaliophobia”) as well as non-words that consist of permissible spelling patterns but have no meaning (such as “scritten” and “borker”). Decoding skills are not as useful when reading words that contain irregular grapheme-phoneme patterns, such

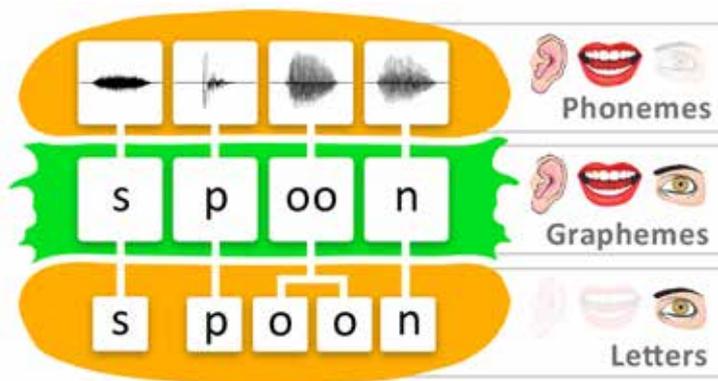


Figure 1: A hamburger analogy can help students to understand how a word, in this case ‘spoon’, may be divided into phonemes (speech sounds), graphemes (letters and groups of letters that represent speech sounds) and letters (visual symbols).

as “bureau”, “yacht” and “colonel”. Research, however, suggests that irregular word reading ability depends on reading experience and decoding ability (Sprenger-Charolles & Serniclaes, 2006).

### Learning to read is not natural

Our alphabetic code is an artificial invention that is just 3000 years old. We haven't had the time to evolve brain structures specifically for processing written language. Instead, our written language is based on our spoken language. We ‘hack’ into the brain architecture that has evolved for spoken language and thus our capacity to process written language depends on the brain's existing language networks (Snowling & Hulme, 2011a). Eventually, the two systems become symbiotic and integrated (Snow, 2016) but initially students learning to read require *specific and prolonged instruction* in mastering a new visual code for the words they already understand and know how to say.

While many Australian children acquire adequate reading skills without too much difficulty, a significant proportion do not. For many of these students, weak decoding skills cause difficulty in reading unfamiliar words, and thus they do not achieve fluency and do not benefit from effective self-teaching. Furthermore, a large proportion of children with reading comprehension difficulties have those difficulties as a consequence of poor decoding ability due to inadequate instruction, dyslexia, or a combination of inadequate instruction and dyslexia (e.g., see Vellutino, Fletcher, Snowling, & Scanlon, 2004 for a review)

### What are the characteristics of dyslexia?

“I get confust I sawnd wasds aut dut never get it rit...if il alitalpit an Barest cos ifil don't get it rit Pepale will lavef at me.”

Casey, 8, student with dyslexia.\*

Decoding difficulties and associated weaknesses in visual word recognition are primary indicators of dyslexia (See Figure 2, below, for a full definition). These difficulties are often unexpected given the student's age and other cognitive abilities, and are not caused by sensory processing issues such as poor eyesight or hearing loss. Historically, definitions of dyslexia relied on a discrepancy between IQ and reading ability; however more recent research shows that an IQ test is not required to identify dyslexia, and that dyslexia occurs across a range of intellectual abilities (e.g., Tanaka et al., 2011). Children with dyslexia struggle to form accurate, automatic letter - sound associations. They find decoding very difficult and effortful, even if high quality, evidence-based methods of teaching are employed in the classroom and practised during individual tutoring.

Students with dyslexia often struggle with developing reading fluency and reading comprehension, and spelling can be particularly difficult. They may have severe literacy difficulties despite having many cognitive strengths and despite a language-rich home environment in which they are read to

every night. These difficulties can be extremely confusing, frustrating and heart-breaking for the students, their parents and their teachers.

### Incidence of Dyslexia

Dyslexia does not have any clear ‘cut-off’ points, meaning that it is not a distinct category. It is best thought of as a term referring to the lower end of a continuum of reading ability, in the same way that the term ‘hypertension’ describes blood pressure that is at the highest end of the measurement scale. For this reason, there is some variation in the reported incidence of dyslexia. For example, one large US study found that reading disability affects one in five children (Shaywitz, 2003), while the Australian Dyslexia Working Party estimates that dyslexia will affect 5-10% of children, making learning to read very difficult for them even if their teachers use sound, evidence-based teaching methods (Bond et al., 2009).

Dyslexia exists in all languages, although the complications of English orthography make decoding particularly challenging. Reading difficulties in consistent orthographies and in logographic systems (such as Chinese) are characterised more by fluency problems than by accuracy problems (Peterson & Pennington, 2012). Although there is variation in how dyslexia manifests itself across languages, the underlying causes of dyslexia appear to be universal (Ziegler & Goswami, 2005).

### Dyslexia and Phonological Processing Skills

So what causes these often unexpected difficulties? Dyslexia runs in families, suggesting a strong genetic component (Hulme & Snowling, 2016). An extensive body of behavioural and neuro-imaging evidence suggests that the core deficit in dyslexia is impairment in *phonological processing skills*, which makes it more difficult to map the written representations of the language onto its sound structure. This results in poor decoding, poor self-teaching and thus poor reading ability (Share, 1995). Researchers have discovered three main phonological processing tasks which are believed to tap into the underlying phonological processing deficits in individuals with dyslexia.

*Phonological awareness* is an umbrella term referring to the ability to identify, reflect upon and manipulate the sounds of language at any of its various levels of representation, including skills



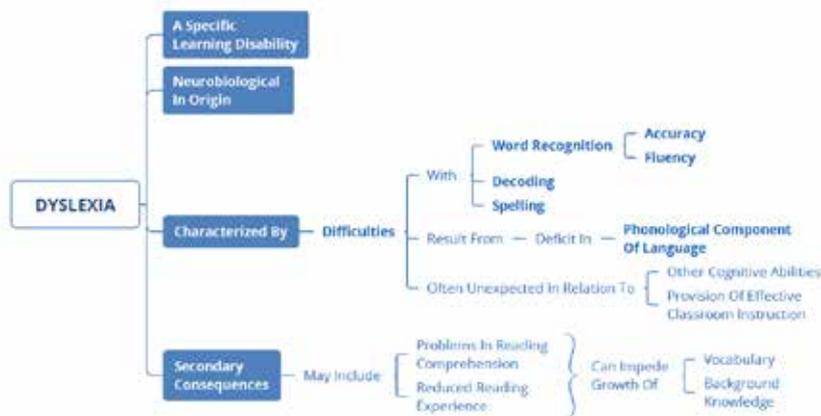


Figure 2: Summary of International Dyslexia Association definition of dyslexia (IDA, 2002).

such as rhyming words or counting syllables. *Phonemic awareness*, a subskill of phonological awareness that reflects understanding of and ability to manipulate individual phonemes in words, seems to give children a significant advantage in learning to read the printed form of language (Wagner, Torgesen, & Rashotte, 1999). Phonemic awareness is a powerful and early predictor of individual differences in reading development (Melby-Lervåg, Lyster, & Hulme, 2012) and phonemic awareness difficulties are a hallmark of dyslexia.

Scientists have discovered that many individuals with dyslexia also have slower verbal processing speed, as assessed through *rapid automatic naming* (RAN) tasks. RAN tasks require individuals to name a series of objects, colours, numbers or letters as quickly as possible. Difficulties with RAN are thought to reflect inefficiencies in the process of retrieving a phonological form that corresponds to a visual stimulus. RAN performance is correlated with reading ability and is a strong predictor of future reading skills in pre-literate children (Lervåg & Hulme, 2009). Deficits in both RAN and phonemic awareness lead to more severe reading impairments than a deficit in phonemic awareness or RAN alone (e.g., Wolf et al., 2002; Wolf & Bowers, 1999).

Many individuals with dyslexia also show weaker *phonological memory*, reflecting a reduced ability to recall what was just said (e.g., Jeffries & Everatt, 2004). Phonological memory has been shown to be integral to vocabulary acquisition and is an important sub-skill in many aspects of reading, such as remembering the sounds when sounding out unfamiliar words (Wang & Gathercole, 2013).

Children with dyslexia experience ongoing difficulties with phonological processing throughout their lives, and these difficulties appear to be responsible for a significant disadvantage in learning to read print (Hulme & Snowling, 2016).

### What causes phonological processing problems?

The “phonological deficit hypothesis” posits that phonological processing tasks depend upon the strength of phonological representations: the brain’s representations of the sound structure of language (e.g., Thomson & Goswami, 2009; Snowling, Bishop, & Stothard, 2000). These phonological representations are thought to be weaker, or ‘less specific’, in individuals with dyslexia.

The precise nature of the phonological deficit in dyslexia is an area of intensive, ongoing research. Since the phonological system becomes increasingly sensitive to phonemic differences between words as vocabulary size grows (Ziegler & Goswami, 2005), a close relationship is thought to exist between vocabulary acquisition and phonological processing. A sub-group of individuals with dyslexia may have speech perception deficits (e.g., Adlard & Hazan, 1998), or poorer speech perception in noise (e.g., Ziegler, Pech-Georgel, George, & Lorenzi, 2009), and speech perception measures at infancy are predictive of later reading acquisition (e.g., Lyytinen et al., 2004). Other studies have suggested that phonological processing difficulties in dyslexia may be related to short-term memory processes operating on phonological representations, rather than impaired phonological representations as such (Ramus, 2014). While many questions remain,

further research will likely provide better explanations and interventions for the phonological processing deficit in individuals with dyslexia.

### Children with dyslexia may also have other difficulties

Comprehension is the goal of reading. According to the ‘simple view’ of reading proposed by Gough and Tunmer (1986), reading is the product of decoding and language comprehension. In other words, being a good reader depends on both strong decoding skills and strong language skills. If either skill is weak, the individual will experience reading difficulties.

Language deficits are common in individuals with dyslexia. For example, Eisenmajer, Ross and Pratt (2005) found that 53% of 151 children assessed for learning disabilities demonstrated both reading *and* oral language difficulties. These children showed significantly more impaired phonological processing and spelling skills than the children with *either* language or reading difficulties. The evidence suggests that although dyslexia and specific language impairment (SLI) frequently co-occur, they are distinct disorders, as shown in Figure 3 (Ramus, Marshall, Rosen, & Lely, 2013). The frequent co-occurrence of dyslexia and language impairment is likely to be the result of phonological deficits that are common to both specific language impairment (SLI) and dyslexia (Snowling, 2009).

Another difficulty that often co-occurs with SLI and dyslexia is a history of speech sound difficulties, or problems in pronouncing words clearly. There is mounting evidence for a link between dyslexia and articulation difficulties (Pennington, 2006). Articulatory difficulties may interfere with the development of phonemic awareness and grapheme-phoneme associations (e.g., Lalain, Joly-Pottuz, Nguyen & Habib, 2003; Snowling, 2009). Children whose articulation difficulties are unusual, severe, or persistent are particularly at risk (e.g., Nathan, Stackhouse, Goulandris, & Snowling, 2004).

Children with dyslexia may also have attention problems. Between 25% and 40% of children with either dyslexia or attention deficit hyperactivity disorder (ADHD) would also qualify for a diagnosis of the other disorder (Pennington, 2006). Finally, the fact that written language is a visual code had led researchers to investigate possible visual processing deficits in dyslexia.

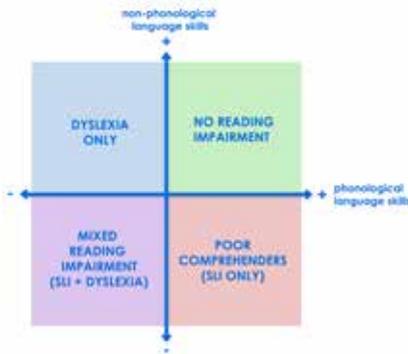


Figure 3: Relationship between dyslexia and specific language impairment (SLI) (Ramus et al., 2013)

However, a joint policy statement issued by the American Academy of Pediatrics (2009) concluded that "... subtle eye or visual problems, including visual perceptual disorders, refractive error, abnormal focusing, jerky eye movements, binocular dysfunction or crossed eyes, do not cause dyslexia" (p. 839).

### How can we help kids with dyslexia and other reading difficulties?

**"...There are children and adults who have dyslexia but were never lucky enough to be diagnosed. To have something to blame. They will know something is wrong and isn't right with them, because they are not stupid or pathetic or a waste of space or inadequate but they will believe they are..."**

Eliza, 17, student with dyslexia.\*

The alphabetic code is a mystery to Oliver, the student I mentioned at the beginning of this article, because he has dyslexia. That means he needs a lot of help in creating associations between graphemes and phonemes so he can learn to decode and read fluently. He's not 'dumb': far from it. His profile suggests he has tremendous potential for improvement: despite severely impaired overall reading ability, decoding, phonemic awareness, grapheme knowledge and spelling, he

has excellent non-phonological language skills. His RAN and phonological memory are also relatively strong. He concentrates well and is motivated to improve, and has a very caring and supportive family. There are no quick fixes or guarantees, only a long course of intensive work on core skills, but I regularly see students like him make significant and important progress. Just this morning, I received a text from a student whom I first saw at the age of eight who also had profound literacy difficulties. After many years of regular, intensive help, she's about to complete a double degree in teaching and special education.



What remains a mystery to *me* is this: How can a kid like Oliver come so close to disaster and not receive the type of assistance that research (and my own clinical experience) shows will make a tremendous difference to his life? Why are Oliver's difficulties misunderstood by his very caring and well-meaning teachers?

There is no question that every teacher wants to ensure the best possible outcomes for their students. The blame does not lie with Oliver's teachers or his school. The problem seems to be that very few teachers are *aware* of the extensive research on literacy development, literacy difficulties and dyslexia. Even fewer have received training in the evidence-based teaching of reading. In my experience with running training workshops on this topic for teachers around Australia, teachers are *desperate* for more information and training on helping our students with reading development. Until we improve teacher training, millions of Australian students with reading disorders, as well as their parents and their teachers, will continue to believe that their difficulties are a mystery or, worse, a result of a lack of intelligence. Oliver needs urgent, intensive, ongoing and individualised explicit instruction to help him to read and spell. I hate telling his mother that it is highly unlikely he will get that kind of help at school.

Many of Australia's leading researchers, speech-language

pathologists and psychologists have spent years unsuccessfully urging our education system to align itself with research recommendations. Three important facts need noting:

1. Australia is failing to equip its increasingly frustrated and well-meaning workforce of dedicated teachers with the skills required to teach reading and spelling effectively (Buckingham, Wheldall, & Beaman-Wheldall, 2013);
2. Australia has so far failed to follow the recommendations of three major inquiries into the teaching of literacy, each of which strongly supported *explicit, systematic, evidence-based instruction* in the 'big five' literacy skills: phonemic awareness, phonics, fluency, vocabulary and comprehension (<http://www.fivefromfive.org.au/>); and
3. we are especially poor at providing intensive and explicit instruction in the very skills that fail to develop most often in our poorest readers: phonemic awareness and decoding ability. Teaching these skills should be 'bread and butter' for all teachers: research shows that *all* students benefit most from reading lessons that explicitly teach students about the relationship between phonology and orthography in language, helping them to 'break the code' and master self-teaching (Rowe, 2006).

Finally, it's crucial that discussions about the usefulness of the term 'dyslexia' don't obscure the fact that an unacceptable number of Australian children are failing to develop adequate literacy skills (Castles, Wheldall, & Nayton, 2014). Dyslexia, as identified by decades of careful, well-replicated scientific research, definitely exists. What *doesn't* yet exist is widely available, effective, evidence-based help for Australian students with reading difficulties.

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# Do Dyslexics need Dyslexie?

**Kevin Wheldall and  
Eva Marinus**

**T**he media in general, but perhaps the early evening current affairs shows in particular, love a good 'new cure for dyslexia' story. The latest gee whizz offering doing the rounds is a special font called Dyslexie that apparently makes reading so much easier for children with dyslexia. Recently, the Australian media has labelled the font as "a breakthrough" (Channel 7 News 30/4) and a small Sydney-based company has struck a deal with Australia's largest book publishers to print thousands of books in the new typeface (the Australian, 16/4). And would it not indeed be wonderful if we really could help children with dyslexia simply by changing the font of the written materials we offer to them?

At the risk of being labelled party poopers, we beg to differ; our research (just published in the international journal 'Dyslexia') casts serious doubt on the efficacy of this new font. In essence, what we found was that the Dyslexie effect is, in fact, very small, leading to only 7% faster reading speed. Moreover, even this small difference can be achieved with a regular font, such as Ariel, by simply adjusting the word and letter spacing.

The Dyslexie font was developed by Christian Boer, a Dutch graphic designer. The font is characterised by heavier than normal bases to the letters. The font also includes larger spacings both between words and between letters in words, an important consideration, as we shall see. The figure right provides an illustration of the way that Dyslexie (first line) differs from the popular Ariel font (second line).

But does Dyslexie make conceptual sense? And, even more importantly, what is the evidence for the efficacy of this new font?

There is now general consensus in the field of reading research that dyslexia has multiple causes. In most individuals with dyslexia, the cognitive problems that underlie their reading impairment are

beyond the early visual level. Few reading scientists would have expected that the idiosyncratic letters of Dyslexie would positively influence reading performance in the first place.

The 'heavy bases' of the letters were developed to help suppress the supposed tendency of individuals with dyslexia to mirror-reverse or rotate letters. Notably, reading researchers have already refuted this 'mirror and rotating' theory, over forty years ago. Moreover, the graphic designer aimed to make the letters as distinct as possible from each other to avoid confusion between letters. However, our pixel-overlap analyses show that, probably due to the heavy bases, the letters of Dyslexie are actually less distinct than the letters of Ariel. Consequently, it is unlikely that providing additional visual support, such as that provided by the Dyslexie font, will prove to be effective.

That's all very well in theory but what about in practice? For a product that has been seized upon so readily



and the considerable sums invested to publish books in this font, there is surprisingly little empirical evidence to support its efficacy. In fact, there have been no published, peer-reviewed, journal articles testifying to its efficacy, or otherwise, until now. The evidence base consists of three unpublished Dutch masters theses and two non-refereed articles in practitioner journals. The results of these studies were equivocal, to say the least.

Consequently, our research team (Eva Marinus, Michelle Mostard, Eliane Segers, Teresa Schubert, Alison Madelaine and Kevin Wheldall) set out to test whether the Dyslexie font really does make reading easier for children who struggle with reading. We tested 39 low-progress readers from grades 2 to 6 who were asked to read four different texts of similar difficulty level in four different font conditions (in counterbalanced order) that were all matched on letter display size, but differed in the degree to which they were matched for spacing settings.

Our results showed that low-progress readers did indeed perform better, in terms of number of words read correctly per minute, in Dyslexie font than in standard spaced Arial font. To put this in perspective, however, this amounted to only 7% more words read correctly per minute. More importantly, when within-word spacing and between-word spacing in Arial font was matched to that of Dyslexie font, the difference in reading speed was no longer significant. We concluded that the efficacy of Dyslexie font lies not in its specially designed letter shapes, but arises from its particular spacing settings. These spacing settings can be replicated in Arial and other fonts. As a proof of concept, we have developed [EasyRead](#), a free Chrome browser extension that applies Dyslexie's spacing settings to all fonts on all web pages you visit. You can install EasyRead from the Chrome web store: <https://goo.gl/CLwZgu>.

The implication of our study, the first refereed journal article published on the efficacy of the Dyslexie font, is that there is still no evidence to suggest that the font is particularly helpful for children who struggle to read. Parents and teachers might well-advised to save their money and not buy specially published

books employing the Dyslexie font if the only benefit is a mere 7% increase in reading fluency. This increase, moreover, can be replicated in other fonts by simply adjusting the spacing. Instead, parents and teachers might be better-advised to concentrate on the phonological aspects of reading by employing effective reading instruction.

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The wind howled in the gum trees.

The wind howled in the gum trees.

Dyslexie font vs Arial font

# Reporting from the Battlegrounds

## Restoring balance to the concept of 'balanced' literacy instruction by speech pathologist and former Council member Dr Roslyn Neilson

In the Australian Reading War trenches, the term 'balanced literacy instruction' has taken on an ominous meaning for those who fight for the use of systematic synthetic phonics (SSP). 'Balance' tends to be interpreted by the SSP trench soldiers as a war cry emanating from the other side of the battlegrounds. Advocates of 'balanced' literacy instruction often claim that the 'reading wars' no longer exist, because 'balanced literacy' has fixed the problem. But claims from educators that they teach literacy in a 'balanced' way tend to support a pedagogy that strongly prioritises meaning-related skills over code-related skills, with phonics instruction being imposed incidentally, haphazardly and half-heartedly onto the activity of deriving meaning from texts. In that kind of 'balanced' classroom, there is no systematic organisation of phonics teaching, no opportunity to practise phonics skills to mastery, and no sounding out of words; instead, the focus is primarily on the meaning of a given text, and students are still encouraged to identify unfamiliar words by means of looking at the pictures, then looking at the first letter and guessing a word that might make sense.

None of the advocates of SSP would deny that meaning-related literacy skills should be taught. The question from the SSP side of the battlegrounds is, surely, how this should be achieved in the context of also teaching phonics efficiently. There is a surprisingly small amount of

empirical research that focuses directly on how meaning-related and code-related pedagogies might be combined in classroom practice - although what research there is has recently been summarised in a document published by the What Works Clearinghouse (Foorman et al., 2016). Note that this particular What Works Clearinghouse (WWC) publication is unusual in that it is essentially a position statement about teaching based on research, rather than an evaluation of a specific teaching program.

One of the more recent research articles referenced in that WWC (2016) document is a New Zealand study by Tse and Nicholson (2014). This piece of research was recently brought to the attention of Australians in *The Conversation*, and the full published article is freely available online. Tse and Nicholson's (2014) intervention study used a randomised controlled trial (RCT) design to explore the use of an explicit systematic phonics program that was designed to supplement the standard text-centred approach to reading pedagogy currently used in New Zealand classrooms. This is an exciting development in the Australian Reading Wars: reinforcements from across the Tasman have appeared on the horizon!

The present review of the Tse and Nicholson (2014) article will cover the same questions that have been addressed in my previous journal article reviews in the LDA Bulletin: Is the research reputable? Is the article relevant? What was involved in the research? What were the outcomes? And, finally, what can we learn?

### Is the research reputable?

The inclusion of the Tse and Nicholson (2014) research study in the WWC document mentioned above (Foorman et al., 2016) is itself a strong endorsement, but there are additional reasons to take the study seriously. The second author of this article, Tom Nicholson, is an experienced academic with a very solid history of publishing research and providing useful teaching and assessment material. One of his

more recent co-publications, *The New Zealand Dyslexia Handbook* (Nicholson and Dymock, 2014), has formed the basis of much of the New Zealand effort to come to grips with recognising and working with students with reading difficulties in an evidence-based way.



The journal in which the Tse and Nicholson (2014) article was published, *Frontiers in Psychology*, is a new one to me; it is not one of the conventional academic journal publications that I have been brought up to trust. On reflection, though, I think it can be argued that this journal represents a good example of academic research being dragged into the 21st century. *Frontiers in Psychology* provides open access to its published articles - a very welcome feature for those of us who do not have full access to online library databases. The journal also seems to aim for as much rigour as possible in maintaining the quality of the research. The academics who serve on the editorial board and carry out the peer reviews are explicitly identified in the final publication; I think this feature actually provides a welcome increase in the transparency of the process of accepting publications. And responses to and commentaries on particular articles are published in a very timely fashion. *Frontiers in Psychology* claims to be currently the second-most cited psychology journal in the world.

Tse and Nicholson's (2014) research involved a fairly small but tightly run RCT, details of which will be discussed below. It is rare for education intervention studies to use RCT designs; this research effort is certainly worthy of careful attention.

### Is the article relevant?

The answer to this question is undoubtedly 'yes'. The relevance of the research comes from two sources.

Firstly, the current NZ approach to teaching reading is similar to the widespread Australian approach, relying heavily on the shared reading of 'Big Books' – an activity championed by Holdaway (1982) in the early days of Whole Language practice. Standard shared book reading practice includes only incidental reference to (analytic) phonics. Given the current difficulties reading professionals (including teachers, educational academics, and cognitive psychologists) are experiencing with the term 'balance', it is clearly useful to have research that operationalises and evaluates a kind of 'balanced' literacy teaching that incorporates shared book reading but does not allow SSP teaching to be compromised.

Secondly, the study was carried out in three low SES schools with virtually one hundred per cent representation of Maori or Pacific Islander students – a population that has much in common with Australian Indigenous students in terms of undue representation of children showing low literacy progress. This research therefore focuses on a student group that is not only particularly needy in terms of literacy outcomes, but is also very likely to need English oral language support in the formal school setting. As is the case in Australia, this New Zealand population includes something of a perfect storm of disadvantaged children for whom English is not a first language, and whose parents themselves may not have had the opportunity for formal Western-style education. Any program that can potentially address these students' oral language needs as well as their early code-related needs, has clear relevance.

### What was involved in the research?

The research focused on three disadvantaged schools, as mentioned above. It is implied, although not explicitly stated, that all 96 students in Grade 2 in the selected schools participated in the study (Grade 2 is the second year of formal schooling in NZ). The study ran from May to November of the school year, and the participants were on average just over six years of age at the start of the study.

Participants were, at the start of the study, sorted into three ability levels (higher, middle and lower) on the basis of their single word reading on the *Burt Word Reading Test* (Gilmore et al., 1981). Once this sorting was achieved, students in each ability level were randomly assigned to one of the four treatment

groups (the nature of the treatment programs will be explained below):

- A combined Big Books and Explicit Phonics group
- A Big Books only group
- An Explicit Phonics only group
- A control group in which mathematics support was provided.

With 96 students, three ability groups and four experimental conditions, there were 8 students in each 'cell' of the design; these cells further divided into two 'teams' (groups of four) for the purposes of intervention sessions. (It was clearly fortunate for the experimenters that the school numbers worked out so evenly!)

The control group in this design is a very important one. These students in the control group were provided with an alternative treatment – mathematics work – that was not hypothesized to affect their literacy outcomes. This experimental control provides a check for the possibility of the outcomes being affected by mere participation in an experimental study.

The report on the research study does not clarify what educational experiences the students were receiving in their regular classrooms during the course of the intervention, apart from specifying that they were not receiving Reading Recovery. Given that students were only withdrawn from normal classroom work for 30 minutes per week for the purposes of participating in the study, it can safely be assumed that all groups were exposed to the same normal classroom teaching, and that classroom experience would not have affected the groups differentially.

All the pre- and post-intervention assessments, as well as all the interventions, were carried out by one commendably industrious individual, the first author. This feature of the implementation of the study, while quite understandable in terms of practicalities of research, creates two problems. Firstly, the strongest RCT designs aim for 'blind' assessment of the student outcomes, where the person doing the assessment is not aware of the experimental group to which the participant belongs. Halo effects can easily creep in where a blind assessment condition is not met - although the relatively objective nature of the tests used in this study probably mitigates that potential problem. Secondly, if the instructor has a pre-conception that one of the conditions is superior, this does allow a halo effect to creep in to the intervention delivery as well – and I note that fidelity of implementation was not documented.

The pre- and post-intervention assessments were extensive, covering a range of literacy skills. This feature of the study allows for a broad evaluation of the outcomes of the intervention. A few standardised tests were used (the *Neale Analysis of Reading Ability*, Accuracy and Comprehension Scales, the *British Picture Vocabulary Scale*, and the *Wide Range Achievements Test* for mathematics) - as well as unstandardized tests of nonword reading, phonemic awareness and spelling, chosen because they provided a suitable difficulty range.

The appendix of the research study provides an example of a lesson plan for one of the Combined Big Books and Phonics sessions. There were three components, presented in the following order:

1. A phonics focus (in this session the silent e rule), with an explicit explanation of the rule and some examples.
2. A phonemic awareness activity: Selected words from the Big Book are read jointly by teacher and students, including a few words that demonstrate the phonics pattern taught (in this session the phonics words were 'came', 'made' and 'gave'). This is followed by 'Turtle Talk', which consists of the teacher segmenting some of the words into phonemes and having the students guess the word that was segmented. Students also get a chance to Turtle Talk the words and have the teacher guess. (In this session, explicit mention is made of irregular words and silent letters in words like 'dough', 'knit' and 'wriggled'.)
3. The reading of the Big Book: There is some initial oral discussion orienting students to the story. Students are invited to predict what might happen next during the reading of the story. The reading is followed by an oral discussion of comprehension questions. (In this session the discussion focuses on the narrative structure of the story and issues of problem solving). Each Big Book is re-read over three sessions.

The Phonics Only group had the same phonics focus as the Combined group, as well as the Turtle Talk activity, but no Big Book reading (components 1 and 2); the Big Books Only group had only Big Book reading (component 3).

The 'dosage' of intervention was relatively minimal: only twelve 30-minute sessions for each condition, delivered

once a week. At least twice the amount of material had to be covered within the 30 minutes in the Combined condition than in the Phonics and Big Books conditions; the authors simply note that the material therefore had to be covered in relatively less depth in the Combined condition.

The actual phonics program followed a sequence of phonics rules specified by Calfee and Patrick (1995); a list of the phonics rules covered is provided within the Nicholson and Tse (2014) article. The examples shown are simple, and the program seems to be quite devoid of the “bells and whistles” that characterise many more recent phonics programs – jingles, gestures, elaborately-drawn characters representing letters or sounds, etc. I am not convinced of the utility of the section on l-controlled vowels early in the phonics sequence, but I acknowledge that it is difficult to get experts to agree on sequences of teaching phonics. The phonics material covered in this study was reportedly adjusted to the three ability levels of the students (although I noted that no evidence was provided in the article of the actual phonics skills achieved by each of the ability levels in the pre-tests). There is no documentation of practice to mastery, although phonics skills were monitored by means of short phonics quizzes after each session.

As described above, the Turtle Talk activity was the phonemic awareness component of the study. As was the situation with the phonics program, there is no record of whether the segmentation involved was matched to the phonemic awareness skills of the students. The Turtle Talk activity was based on a thoughtful little article by Gough and Lee (2007), which is freely available online. I recommend that article as interesting reading; it provides strong arguments for ‘cutting to the chase’ of phonemic awareness and teaching only those skills that are directly involved in early literacy acquisition.

Big Book reading in this study may have differed from how some teachers approach the activity, in that there is no mention made in the study of attention being drawn to various features of print in the book.

### What were the outcomes?

Given all the comparisons involved in this design, with three ability levels, four experimental conditions, pre-post intervention changes, and additional data about the phonics quizzes, the results

section of the article is rather unwieldy, and it takes quite a bit of patience and persistence to come to grips with the results and to understand the statistics used. There were several non-intuitive contrasts made along the way in the course of the statistical analyses, but the authors have helped by providing graphic illustrations to show the patterns of results. Both significance levels and effect sizes are cited, and this does add to the strength of the conclusions.

The results were, in the end, fairly clear-cut, showing strong trends in favour of the Combined condition - that is, the groups that were taught explicit phonics combined with Big Book reading. Basically, the Combined group showed the strongest improvements across most of the literacy measures used. The maths control group did improve their maths scores but not their literacy scores, which showed that improvements in literacy measures were largely confined to the groups that had actually received literacy intervention. The Phonics Only group improved in nonword reading as much as the Combined group did, and the Big Book Only group improved in reading accuracy as much as the Combined group did, but these were the only areas in which the Combined group did not perform better than the others. The vocabulary measure did not record (or was not sensitive to) any changes over the study.

The analysis of the results in terms of ability level is rather disheartening. At the beginning of the study, the difference between the ‘middle’ and the ‘lower’ ability groups was very small on all the measures, and only the ‘higher’ group – the upper third of the total group – scored within the average range on the standardised pre-test scores. Both the middle and lower groups scored close to zero on the other measures (including non-word reading and phonemic awareness). All the ability level groups made some gains during the study, but the gap did not close at all. The only substantial *relative* improvement that I could find was shown by the middle ability group in phonemic awareness and nonword reading, and this improvement only occurred for students in the Combined condition and the Phonics Only condition. But by the end of the study, the lower ability groups in all the experimental conditions had not yet reached the level of phonemic awareness or decoding skills shown by the higher groups at the beginning of the study. One can only see the gap widening further in higher grades.

### What have we learned?

Importantly, this study has shown that it is of benefit to students to work on phonics systematically, and also to have this work specifically reinforced with reference to reading texts. Doing both is better than doing only one; doing both is an effective kind of ‘balance’. Disappointingly, this benefit did not seem to allow the weakest group of students to catch up to their peers, at least in this study.

The small-scale nature of this particular intervention – twelve 30-minute sessions – raises the obvious question of what might be achieved if a similar kind of ‘balanced’ teaching were routine in whole classrooms, where a full year of two-hour literacy blocks could allow both systematic synthetic phonics activities and text reading activities to be covered in greater depth. In day-to-day whole-class teaching there could be more opportunity for students to practise to mastery, and there could be greater flexibility for teachers to adjust teaching to individual students.

The fact that Big Books were chosen as the texts to use in this study raises another potential question for further research. I think I am right in suggesting that Big Books are generally published on the basis of their literary merit (as judged by publishers), the quality of their illustrations, and their suitability for the language age of young students. Many phonics advocates prefer to use decodable texts in the classroom and for home readers. There are, these days, many rather good quality decodable texts written for young children – books with reasonable literacy merit, interesting illustrations and at least some potential for narrative analysis and vocabulary extension. There are even several commercial systematic phonics programs available with purpose-written decodable texts, designed to foster practice in the particular phonics patterns that are being taught. It would be interesting to ask if there might be a benefit to using decodable texts (matched to students’ phonics knowledge) instead of Big Books when combining SSP and text reading, especially for the low-progress readers. It might be argued, on the other hand, that decodable texts might limit the progress of higher-level students, who benefit from exposure to a large range of orthographic patterns of English. This is an important empirical question, and a comparison of Big Books versus decodable readers might shed some interesting light on the issue.

Given the lack of change in vocabulary scores in the study, the authors made the suggestion that further research is needed into programs that incorporate more systematic vocabulary instruction into text reading. And, probably on the basis of the experience of running the control groups, the first author also ventured an interesting suggestion about incorporating maths concepts into Big Book reading.

I was left with several queries about the Turtle Talk activity. This was shown to be a powerful intervention tool for the students who already had quite substantial phonemic awareness, but it clearly left many of the lower ability students behind. A diagnostic phonemic awareness test that pinpointed students' levels of phonemic awareness and provided reasonable targets within the students' zone of proximal development, might allow more focused phonemic awareness support. Furthermore, a deep-seated problem with the Turtle Talk process, as it was described in this study, is that it leaves teachers in charge of choosing words from the Big Books and deciding how they should be segmented. It has been shown many times that teachers tend to need a good deal of support in the task of segmenting words into phonemes. As a case in point, in the Appendix to the Tse and Nicholson (2014) article itself, the segmentation of the word 'stitched' is shown as 'st-i-tch-ed' (with the initial consonant cluster erroneously shown as one phoneme, and the pronunciation of the -ed morpheme not specified as a /t/); and the segmentation of the word 'wriggled' is shown as 'wr-i-gg-l-ed' (with no advice about the pronunciation of the syllabic /l/ and no specification that the -ed morpheme is pronounced as /d/.) Very systematic phonemic awareness support for teachers would need to be built into a program that depended heavily on Turtle Talk, and very careful consideration would have to be given about the handling of morphemes within the practice.

These concerns aside, I think it is clear that the Reading Wars would generate much less heat and probably fewer instructional casualties if the concept of 'balance' could be informed by more empirical research along the lines of the Tse and Nicholson (2014) study. Is peace possible?

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## Tom Nicholson responds...

Ros Neilson's review is critical but fair. The gist of our findings was that literacy educators need to consider more seriously the possibility of mixing systematic, explicit phonics instruction with the use of natural text in the teaching of reading since not many researchers have tried to do this.

The Shapiro and Solity (2016) study also took this approach (see the review by Ros Neilson in the LDA Winter 2016 Bulletin). These researchers came to similar conclusions to ours about the potential value of Big Books, even though the two research teams were unaware of each other's work.

Our study did have some limitations but met important criteria for internal and external validity in that it was a randomised controlled trial. The results demonstrated that lower SES children, especially indigenous children and those from ELL backgrounds, were helped by the combination of phonics and big books, more so than by big books or phonics alone. It was a good result given that the intervention was quite short. As Ros points out the results might have been even stronger if the study was carried out in classrooms for a whole year with lots of opportunity to practice the taught skills.

One disappointment was that the study did not close the gap between the higher and lower ability readers. However the intervention effect was positive for all three reading ability levels and so in this respect it does seem the right way to go for classroom teaching because it helps all children, not just some. If we were to undertake a similar study we could definitely incorporate adjustments such as using decodable books, using a sequence of phonics skills closely matched to the ability of the children, and making sure that teachers had the support to ensure that all the Turtle Talk activities were 100% phonemically correct.

As Ros points out, the data analyses were complex, but the article includes a detailed example of a lesson plan which gives it practical value to the teacher. A reality for the study was that the results did not fit into the extremes of the reading wars. For example, in the article in *The Conversation* we suggested that this approach might be fantastic for Australian indigenous children but advocates of whole language approaches were quick to argue that this was what was being done in schools anyway as "balanced literacy". They did not share any data to support their views, however.

Today's reality is that lower socioeconomic and indigenous children are left behind while policymakers continue to say that everything will be alright and that the worst is over now. The challenge is to move the achievement needle, to close the gap, and to inspire other researchers to do more work of this kind to build a quantum of research that will move the big elephant forward.

We really appreciate that this review by Ros Neilson has made the study more accessible to a wider audience and explained it in such a clear way.

# What happened to the 'D' word?

**Berys Dixon**

**W**hen the latest version of the Australian Curriculum was released last year, it was very encouraging to read this: **Foundation and Year One: Read decodable and predictable texts...** 'Hurray, at last!' I thought. 'Things are looking up!'

I was excited because it looked like the authorities were at last absorbing the plethora of evidence-based research on best practice in reading instruction. Explicit instruction in phonemic awareness and synthetic phonics are fundamental components of instruction. Decodable texts then provide students with the opportunity to read words using their knowledge of phonic patterns, an approach that may assist early literacy acquisition and reduce the number of students at risk for reading failure.

But it was not to be. On examination of the Qld, NSW and Victorian versions of the curriculum, I noticed that something was missing...

**Victoria:** They read short predictable texts with familiar vocabulary and supportive images...

**New South Wales:** ...demonstrates developing skills and strategies to read, view and comprehend short, predictable texts on familiar topics in different media and technologies

**Queensland:** ...Read predictable texts, practising phrasing and fluency, and monitor meaning using concepts about print and emerging contextual, semantic and phonic knowledge. (ACELY 1649)

Ironically, Queensland even provides the link back to the ACARA website 'ACELY1649' where we can see the identical paragraph (save for that one vital word).

## Why is this so?

Why must the children of Qld, Vic and NSW be deprived of texts that all of them really can read? Once again, a significant number of children, faced with texts that overwhelm their phonic knowledge, will become entrenched in the reading behaviours of poor readers: predicting (also known as guessing) from pictures and first letters, 'getting their mouths ready' and, when all else fails, skipping words altogether.

Although there is not yet consensus on the importance of decodable texts, there are a growing number of studies that support their use. In 2000 Bevens (2016) conducted a study to examine the effectiveness of decodable text in promoting word identification skills, phonics, and spelling abilities as well as positive reading attitudes in early readers. His research questions included:

- Does practice with decodable text in conjunction with a systematic phonics program accelerate word identification skills for first-grade students (USA study)
- Do first graders who use decodable text demonstrate significantly greater gains in word identification skills than a comparison group of students who use trade literature [*we would call these predictable text*].

Two first grade classrooms participated in this study: one was the experimental classroom which used decodable text; the other used patterned and predictable text. Both schools were carefully supervised to ensure that they used the same systematic and explicit phonics instruction covering the identical scope and sequence. Students were assessed on measures of reading using the Woodcock Reading Mastery Test, the Blevins Phonics-Phonemic Awareness Quick Assessment, a decoding test and a reading attitudes survey.

Students using decodable texts significantly outperformed students in the control group on all measures and were more prepared to transfer their phonics skills to new words in formal

assessments.

As well, their confidence in their reading abilities and enjoyment for books grew. In contrast, the control group actually reported an increase in their *dislike* of reading.



Other studies have reached similar conclusions. Cheetham and Allor (2012), reporting on their own study, noted that 'collectively the results indicate that decodability is a critical characteristic of early reading text as it increases the likelihood that students will use a decoding strategy and results in immediate benefits particularly with regard to accuracy'.

And while all children will benefit from explicit instruction in the workings of the alphabetic code, for some children this is vital. According to Cheetham and Allor (2012), 'research asserts that most children benefit from direct instruction in decoding, complemented by practice with simply written decodable stories. Further, for some children this is critical. Stories should 'fit' the child's reading level. Beginning readers should be able to read easily 90 percent or more of the words in a story.'

## Asking the policy makers:

Many months ago, I sent a polite enquiry to the Victorian Curriculum Authority, about the *decodable* word's conspicuous absence. While I await their reply, I have attempted to use my 'predicting' skills to guess the answer.

One guess is that the people in charge of these things believe that decodable texts are still of the *Fip did sit a bit on the hip of Mit* variety and therefore of no educational merit whatsoever.

They may still be of the erroneous belief that predictable or 'authentic' texts will expose children to a greater variety of words than phonic based books (See Table 1 below). They may assume that

children can 'learn to read well by being encouraged to use a variety of skills, processes and behaviours, rather than a particular method or approach' (from the PM Website). The teachers might also adopt the 'feel-good' idea that using predictable texts is more likely to provide 'success, enjoyment and understanding.' (from the PM Website).

I would also guess that some curriculum writers are unaware that reading is not a natural skill, and that most children do not just 'get' reading. They might not be aware that most students benefit from being taught explicitly and sequentially just as they would if learning to play an instrument, or to swim without drowning. And furthermore, I would predict that the plethora of literature on the science of reading acquisition has not yet made its way into the offices, minds and hearts of our educational decision makers. It's a shame that the people from the Victorian Curriculum Authority haven't got back to me because I'm very keen to talk to them.

I'd like them to imagine learning to play the piano. If they had learnt just middle C, I would ask if they would then expect to be given, "Pop Goes the Weasel" to practise? I'd like to ask them what *they* do when confronted by a word they've never seen? I'd like them to realise that any text is decodable as long as you know the relevant parts of the code, and that the use of context and pictures is for interpreting *meaning* and not for deciphering.

I'd like to tell them that decodable texts have moved on from the crazy old tongue twisters; that there are now plenty of funny, interesting and comprehensive stories out there with good plots and engaging characters-books children love to read and can read. And I'd like to ask them to think again about Table 1, which compares the vocabularies of similarly levelled decodable and predictive stories. Which would you choose for enjoyment, engaging plot, understanding, richness of vocabulary, interesting discussion and likely reading success?

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- Berys is a qualified primary teacher who, in 2008, switched from whole language to the explicit teaching of synthetic phonics, vocabulary, comprehension and fluency. Results for all students, including those with learning difficulties, markedly improved. She now dedicates her time to writing engaging decodable stories for Little Learners Love Literacy and Pocket Rockets as well as educating teachers in this approach.*

Table 1. A comparison of popular predictable and decodable texts for beginning readers

	PREDICTABLE	DECODABLE
<b>Title</b>	Harry and the Little Robot	Tim's Quiz
<b>Series</b>	PM	Little Learners
<b>Level</b>	3	3
<b>Total Words</b>	65	65
<b>Different words</b>	18	28
<b>Summary</b>	Harry finds a robot in the shop and they become happy to have found each other.	Tim is a quiz master and is entertaining everyone with his magic tricks.
<b>Nouns</b>	Harry Robot Mum box	Tim's Tim quiz hat bag bat rod pig
<b>High frequency words</b>	is here A The in at too comes and (only in the title)	I It is my am in Yes not He Can on the
<b>Verbs</b>	Click Look looking comes	hop can zim zap
<b>Adjectives</b>	little happy	big top red pet
<b>Title</b>	Clever Fox	The Pip and Tim Zoo
<b>Series</b>	PM	Little learners
<b>Level</b>	6	6
<b>Total Words</b>	114	137
<b>Different words</b>	19	56
<b>Summary</b>	A fox is running away from a dog. He goes over the trees and hills. He finally hides in the reeds.	Pip and Tim set up an unusual zoo in the back yard. There are lots of interesting creatures for the family to see. Unfortunately there is a bit of a disturbance and gran gets a surprise visitor in her handbag.
<b>Nouns</b>	trees hill fox home dog water river	Pip Tim zoo tent mum dad gran slug ants nest rock grubs elephant rabbit frog possum pup flap kitten handbag end
<b>High frequency words</b>	comes see looks go goes	the and have had up in come see look at do you we no a can went will into that was of
<b>Verbs</b>	running runs looks comes see hiding stays go goes	set visit see look lift hold pat cost went bit hop
<b>Adjectives</b>	good safe clever (only in the title)	fun big biggest fat quick

# News from New Zealand: The gap that schools cannot close

**Tom Nicholson**

New Zealand media recently reported research from the government-funded [National Monitoring Study of Student Achievement](#) (2015) showing a two-year reading gap between children in richer and poorer schools<sup>1</sup>. Many of the children in these poorer schools were of indigenous Maori or of Pacific Island ethnicity, making the findings even more concerning. The question is, what causes this gap, and can anything be done about it? There are several possible reasons given in the literature.

The first is the socioeconomic explanation that children from lower socioeconomic (SES) backgrounds start school with lower levels of essential pre-literacy skills. Many studies have found that pre-literacy skills are powerful predictors of future reading success. Alphabet knowledge for example has a very high correlation with reading success in the first year of school. Thus, the explanation is that lower SES families have fewer literacy resources and less education than middle class families. They are thus less able to provide their children with important pre-literacy skills and as a result their children inevitably start school behind their higher SES peers.

The second explanation is the summer slide. The summer slide hypothesis is that although schools do close the achievement gap between children from higher and lower SES backgrounds during the school year this progress is lost during the summer vacation. The summer slide is also called a faucet effect in that the gains

students make during the school year slip away during the summer holidays when students typically do not receive formal instruction.

A well-known study of the summer slide in Baltimore schools (Alexander Entwisle & Olsen, 2007) was reported in Malcolm Gladwell's book *David and Goliath* (Gladwell, 2013). It showed that gains made by schools during the school year to help lower SES students were lost during the summer break while higher SES children continued to make gains during the same summer break. Other researchers have also found this: a narrowing of the gap when students are in school and a widening of the gap during the summer. This explanation again points the arrow at home background because lower SES parents are unable to compensate as well as higher SES parents for the absence of school instruction during summer. For example, lack of access to literacy resources in these communities is well documented. Lower SES communities typically have fewer public libraries and those they have are less resourced and open for shorter times compared with public libraries in more affluent areas (Neuman & Celano, 2001).

Neither explanation points at schools themselves. The faucet theory explanation argues that schools achieve a compensatory effect by narrowing the achievement gap. However, a close analysis of the existing research into this suggests that the reduction in the gap for lower SES students is more marked when they attend schools that have higher proportions of both lower and higher SES students. Thus, the compensatory effect for schools could be more to do with the compensating factor of less advantaged students mixing with more advantaged ones. This is also called the "social composition effect" because lower SES students do better when they attend a school with higher SES students than if they attend a

school where nearly all the children are lower SES.

We looked further into these different explanations in a study that has just been published (Tiruchittamplam, Nicholson, Levin & Ferron, 2016). We thought that the patterns of compensatory effect might be different in New Zealand where there is a high level of segregation *between* schools, so that nearly all the children in any one school are either from higher SES or from lower SES backgrounds. In some lower SES schools nearly all the children are from indigenous and Pacific Island backgrounds. It is not unusual to go into these schools and not see any students of European background. We wondered whether the compensatory effect would apply in such schools.

## The study

We had three things in mind with the study: to compare children from higher and lower SES schools to see if there were differences in their pre-literacy skills, to see whether lower SES schools were able to close the achievement gap during the school year, and to see if pre-literacy knowledge predicted literacy progress over and above the SES status of the schools.

The study involved a group of 126 children from six different primary schools in Auckland New Zealand. The children were assessed on entry to school and then assessed at four further time points. In New Zealand parents can start their child at school as soon as the child turns five years of age. The children in our study were enrolled in the second half of the school year. This was Time 1. The next assessment at Time 2 was the end of that first year. Children were enrolled at different times during that second half of the year so that, in all, the time spent at school in the first year was, on average, only a couple of months. Time 3 was after the first summer break. Time 4 was the end

of the second school year. This was a full year of schooling. Time 5 was after the second summer break. The study covered the first 15 months at school.

Four schools were lower SES and two schools were higher SES. Children were assessed at each time point for pre-literacy skills, high frequency words, word reading in general, non-word reading, and spelling. After a year in school they were also assessed for ability to read passages and comprehend them.

The data on children's progress in literacy in the first 15 months were analysed with two statistical approaches. One approach was hierarchical linear modelling (HLM) and the other was a multivariate F-test approach. These approaches took account of the time children started school and the different schools they were in. Multiple regression and a correlation matrix were also used to find out if pre-literacy skills predicted progress over and above SES.

The first finding was as expected there was a large gap in pre-literacy skills at school entry. Children in the higher SES schools started with much higher levels of pre-literacy knowledge. The second finding was mixed. After a full year of schooling, there were some typical Matthew effects (the 'rich' getting 'richer') in word reading, non-word reading, phonemic awareness, and spelling. There were also some reverse Matthew effects (the 'poor' getting 'richer') for some measures. Lower SES children made more progress than the higher SES children in alphabet knowledge (mainly because the higher SES children were already at ceiling on this test) during the school year. They also kept up with higher SES children in their learning of high frequency words and oral vocabulary.

The third finding was that the gap widened during the summer breaks, especially during the second summer break after the first full year of schooling. Lower SES children fell behind higher SES children on all measures except non-word reading, where both groups lost ground. The fourth finding was that even when we took account of gender and SES, pre-literacy knowledge still accounted for a sizeable amount of the difference in reading achievement between children from the lower and higher SES schools.

### What should we conclude from this?

There were a number of concerning findings. A good example is that after

15 months of schooling, children in the poorer schools were still reading at an early five-year-old level, while children in richer schools were reading at a six-year-old level or better. The study confirmed what we already knew about the predictive value of pre-literacy skills and about the summer slide in that the gap between higher and lower SES children widened during the summer breaks. What was new was that schools did not have a compensatory effect. The gap did not close during the school year and in fact widened on most of our measures.

Even though this study took place in New Zealand, there are similarities to Australia in that children in both countries start school at about the same time and have a summer holiday break of about 6-7 weeks. Many schools in both countries also use a similar whole language approach. There are probably also schools in Australia that are highly segregated in terms of ethnicity and SES. This would certainly be the case for indigenous children in remote areas.

It is tempting to speculate on why the achievement gap happens but this was a correlation study and my statistical friends tell me that we must refrain from speculation because these data cannot tell us the *real* cause of the gap. On the other hand, one finding we identified that does have policy implications is that pre-literacy knowledge has a definite impact over and above SES. This suggests that if we can successfully teach pre-literacy skills to lower SES children, especially in early childhood classrooms, we might be able to overcome the negative effects of poverty and give these children much more hope of success so that they can break the continuing cycle of 'rich get richer' and 'poor get poorer' effects that we found.

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We welcome the submission of articles from LDA members and others with an interest in learning difficulties for possible inclusion in upcoming editions of this Bulletin.

Please submit articles, correspondence about the Bulletin, or letters for publication to the editor. For questions about content, deadlines, length or style, please contact the editor. (Email: wendy.m.moore@gmail.com)

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# A clarion call for more consultants!

From the Consultants' Committee Convenor, **Jan Roberts**

Following the very successful tour by Maryanne Wolf, culminating in her presentation in Melbourne one rainy Friday and receiving the LDA Eminent Researcher Award on Saturday, we now have more understanding of the 'reading brain' and the implications for students who experience dyslexia. This term, 'dyslexia' is now accepted terminology in all states of Australia except NSW, where, jokes Maryanne, dyslexia doesn't exist. But even students in that worthy state need more help than even the most dedicated school can provide, and this is where LDA consultants can play a unique role.

LDA consultants are qualified and experienced specialist teachers who choose to work with individual students and schools to improve outcomes for those with learning difficulties. Being a full-time consultant tutor is almost a luxury, with many benefits beyond the joy of having no more yard duty or staff meetings. It is so rewarding to teach students, young or old, in a one-on-one context without distractions; to be able to focus on students' individual needs; to assess what might be the most appropriate explicit approaches; to utilise the current recommended researched methods of one's own choice; to teach and reteach important skills and concepts until learned; to switch in the middle of the session to a more urgent issue if needed; to encourage the student to think aloud and make mistakes without stress; to have a laugh; and to collaborate with parents and teachers.

It is indeed almost a miracle that the limited time we have with students (usually once a week) makes a really big

difference in their achievement level and, consequently, their confidence. The fact that many of our clients come via referrals from the parents or teachers of our other students is testament to the high regard in which consultants are held.

Currently, 95% of LDA consultants reside in Victoria, a result of Victorians having instigated the organisation 51 years ago. However LDA is now truly an Australia-wide organisation, with Council and membership having a strong representation across all states. The OTS (Online Tutor Search) function on the website has increased requests for tutoring across Victoria. So there is still a need for more consultants in Victoria but even more so in other states. Our few pioneering interstate consultants cannot possibly meet the demand that must be out there, particularly in major cities. The potential is enormous. So this is a call to LDA members who would like to work as private providers, full or part time, in a teaching area of their choice, such as literacy, maths, primary, secondary, or all of these.

To become an LDA consultant, applicants must have the following: (a) experience in teaching students with learning difficulties; (b) post-graduate, LD- related university qualifications; (c) registration with a relevant state teaching body; (d) professional insurance (LDA offers group insurance); and (e) familiarity with current research that will underpin their teaching. To retain certification, consultants must also maintain the required level of professional development in learning difficulties, either through LDA or other appropriate providers. In Victoria, networks of consultants meet for further PD activities and to share concerns, successes and teaching ideas. This network support will also be established in other states once there are enough consultants grouped there.

Given these requirements for certification, some teachers considering becoming an LDA consultant may need to upgrade their qualifications. The LDA website lists relevant university courses that focus on LD and which may offer

specific LD units (which might be sufficient to qualify to a certifiable level). Any teacher who considers that he or she already has the necessary criteria is



welcome to apply at any time, using the application format on the LDA website. LDA is keen to conduct consultancy information seminars that incorporate relevant professional learning (see below). For more information, please contact me (Jan Roberts) via [ldaquery@bigpond.com](mailto:ldaquery@bigpond.com).

Come and join us!

## Expression of Interest in a Consultancy Information Session

Name: .....

Phone: .....

Email: .....

Level of readiness to be accepted as a consultant

- I believe I am sufficiently qualified already; OR
- I would need to upgrade my qualifications or experience.

Attendance at the seminar

- I am interested in attending a seminar on consultancy information plus a PD session
- I would be prepared to attend in Melbourne seminar OR
- I would attend a seminar held in these cities: .....

Please send this Expression of Interest to: [learningpathway@optusnet.com.au](mailto:learningpathway@optusnet.com.au)

For details about the process and requirements for becoming an LDA Consultant, please refer to the website [www.ldaustralia.org](http://www.ldaustralia.org)