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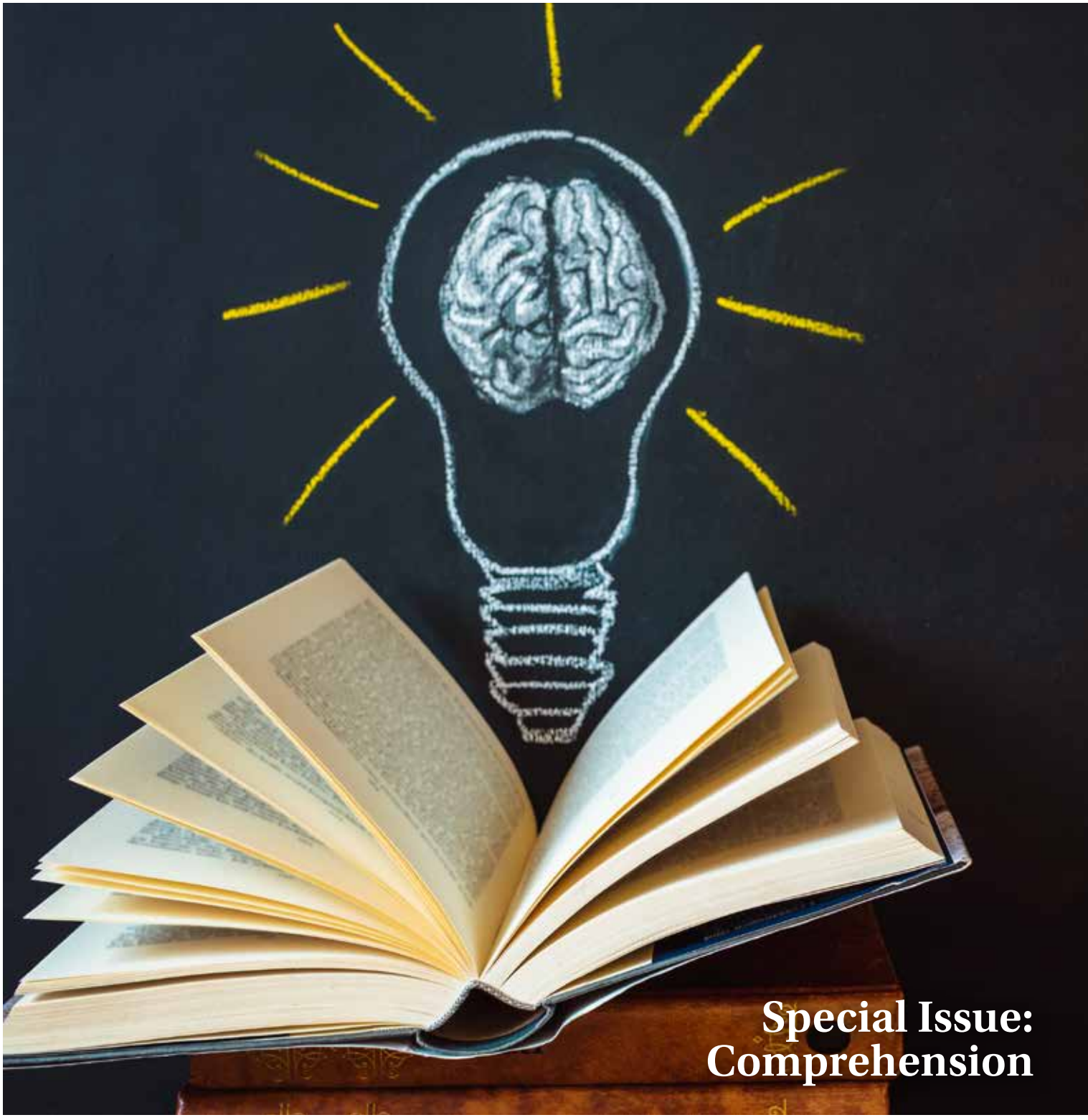
Bulletin



Special Issue: Comprehension

From the President

Lorraine Hammond

As a teacher educator, one of my most rewarding roles is to provide professional development and coaching in school jurisdictions where a decision has been taken to implement evidence-based early literacy teaching. I have been working for three years to support 24 schools in the Kimberley Schools Project in northern Western Australia to adopt this kind of approach to early literacy, and I have written about the progress being made with the Kimberley Schools Project a few times in my reports to the LDA Bulletin.

I am delighted at this stage to have the opportunity to start working towards the same goal with Canberra Goulburn Catholic Education, who, led by Director Ross Fox, made the decision to implement evidence-based phonics teaching from 2021 as part of a system-wide push to improve students' literacy outcomes in 56 Catholic schools across Canberra and southern NSW. With the support of other providers in the Canberra Goulburn Catholic Education diocese, the program will be shifting instruction away from whole language/balanced literacy-based approaches to the explicit teaching of phonics, phonemic awareness, vocabulary, fluency and reading comprehension.

In terms of distance and social advantage, schools in Canberra and the Kimberley couldn't be further apart, but the decision to make changes in both jurisdictions was based on (a) data that showed that many five and six-year-olds were struggling with reading, and (b) evidence that showed that they are best supported by reading programs that teach systematic synthetic phonics. I look forward to reflecting on the similarities and differences between the outcomes in the two jurisdictions as I watch the progress of the Canberra program.

Dehaene (2009) reminds us that "… it is simply not true that there are hundreds of ways to learn to read. Every child is unique … but when it comes to reading, all have roughly the same brain that imposes the same constraints and the same learning sequence" (p. 218). And as teachers, we all have roughly the same goal: to teach our students as efficiently and effectively as possible, in order to enable them to achieve the literacy skills they will need to function in a literate society.

It is a both a privilege and a huge responsibility to have the opportunity to support this wide range of school jurisdictions, teachers and students to achieve their goals.

Reference

Dehaene, S. (2009). *Reading in the brain: The new science of how we read.* Viking.

LDA's President, Dr Lorraine Hammond AM, is an Associate Professor at the School of Education at Edith Cowan University.

Council news

Michael Roberts, General Manager of LDA

LDA National Conference/s January 2021

LDA hosted a series of conferences around Australia in January 2021, and LDA extends thanks to all involved in organising, running and participating in the events. In particular, thanks go to Council members Sally, Nicole, Lorraine, Troy, Sarah, Jo, Lyn, Olivia and David. These conferences have not only been successful in sharing good practice, but they have also promoted LDA as a leader in science of learning. This time of the year presents a great opportunity for LDA and we plan to host a similar program in January 2022. A full report on the conferences can be found on page 5 of this Bulletin.

Constitution and Legal Structure

After receiving extensive legal advice, Council has unanimously decided to recommend a change to the legal structure of LDA from an association registered in Victoria to a non-profit company limited by guarantee registered with the Australian Securities and Investments Commission. This change will be communicated very soon to members alongside a recommended new constitution. A special general meeting will then be held in order for members to vote on this recommendation.

Website

Final testing and de-bugging of the new website is now occurring to enable a May launch. Many thanks to the website committee and in particular Renae Watkins for the work that has been put into this enormous task.

Wednesday Weekly Webinars

The new season of WWW commenced on April 28 with Jan Hasbrouck. We have an excellent line up that also includes an interview with David Kilpatrick and a session from Louisa Moats. Season two of the WWW series will break after Dr Moats' session on June 16 and recommence on the 28th of July with a 'Special Research Explained' series. In this, researchers break down their research and detail the implications for practitioners as a result.

Administration

Many LDA members may have had the pleasure of contacting our new administration assistant Bec Rangas, who commenced with us recently. Bec is an excellent administrator, and we are very fortunate to have her on board to ensure our members are well supported.

Vale Susan Howard

It was with great sadness that LDA was informed that our highly regarded and valued LDA Consultant member Susan Howard passed away on 4 March 2021, at age 73, following a lengthy battle with cancer.

Susan was a dedicated teacher and educational leader all her adult life. Susan taught in all three educational sectors - Independent, Catholic and Government - across all levels from Prep to Y12, university and adult learning. Additionally, Susan worked in executive branches of Government and in state-wide services for 3 years as the inaugural Special Education Curriculum Officer and Professional Development Officer. Susan played a major role throughout the eighties in linking LDA with the Victorian Government innovative policy and legal regulations, ensuring the integration of students with disabilities.

Susan was very proud of her different roles as a member and consultant of LDA. She was a member of the organisation from 1980 until her death and contributed in various ways, including as a member of Council, in policy development, as a member of the Bayside Network and at forums and seminars.

Susan was also a member of the Australian Council for Educational Leaders (ACEL) and was awarded the ACEL Presidential Citation in 2007 and a Fellowship Award in 2010 for her outstanding contribution to the study and practice of educational leadership. Susan was also for several years a member of the VCAA Special LD Advisory Panel.

In her role as an LDA Consultant member, Susan ran *Specialist Education Services*, her private consulting practice that allowed her to combine her immense educational knowledge with her counselling expertise so that she could bring best practice thinking and strategic intervention to the mental health challenges experienced by people with LD.

Despite her illness, Susan continued to practice in 2020 and 2021, providing her comprehensive support to students and adults with LD.

Susan was the much-loved daughter of Leo and Frances Howard (both deceased), the loving sister of Tony, John and Josephine (deceased), fond sister-in-law of Linda and caring aunt of Ollie and Josh. She died peacefully.

Olivia Connelly
Convenor, Consultants Committee

LDA National Conference January 2021

The LDA National Conference January 2021 was entitled ***Science of Learning: Theory into Practice***. It was, to say the least, an innovative event for all concerned, lending a new meaning to the word *hybrid*. In the midst of the challenges presented by COVID lockdowns, LDA undertook the task of hosting an online Virtual Conference as well as a series of face-to-face and/or virtual conferences across several sites in Australia: the Australian Capital Territory, Adelaide, Brisbane, Perth and Sydney. LDA was delighted with the success of the National Conference, and plans to continue with this innovation in 2022. A new option, particularly for rural, remote and overseas educators has been launched!

The LDA Virtual Conference, as a pure online event, took place on 14 January 2021. It included a pre-recorded keynote address from Dr Louisa Moats entitled *Explicit Instruction is at the Heart of Structured Literacy*. This keynote address was also streamed online to all the conference sites on the days when their associated LDA conferences were held, later in January.

This report begins with an extended summary of Dr Louisa Moats' Keynote Address. This is followed by a listing of the speakers and topics involved in the online Virtual Conference and at each of the other conference sites, with brief comments from the site organisers. The attendee numbers reflect original bookings, although some face-to-face sites were able to admit more participants on the day.

Participants at all the virtual and face-to-face conference sites were teachers, speech pathologists, psychologists, tutors, education support officers and educational consultants. Feedback from all the sites showed that attendees felt the presentations were engaging, provided useful strategies, were informative, and increased their knowledge. Comments were made by participants and organisers that it is exciting to be a part of a growing movement in education where the science of learning is being implemented in schools for the greater good of all our students.

LDA extends sincere thanks and congratulations to all involved, especially Renae Watkins, who acted as the Bookings Manager for the events, the LDA council members who took on the responsibility of organising the conference at each of the sites, the hosts who provided the actual or virtual venues, and the presenters who generously contributed their expertise.

Keynote Address by Dr Louisa Moats: *Explicit language instruction is at the heart of structured literacy*

LDA was fortunate to have Dr Louisa Moats providing the virtual keynote address for all the conference sites, and it was gratifying that she began her address with sending good wishes to the friends she made in Australia during her last LDA tour, four years ago.

Dr Moats framed her keynote address within a 'structured literacy' approach to reading instruction, and her presentation outlined what is meant by 'explicit' language instruction within a structured approach.

Dr Moats pointed out that a structured approach to teaching reading covers both the content of what is taught, and the methodology used. She summarised the methodology of a structured approach only briefly at the start, referring to several well-known strategies that are characteristic of direct instruction, including explicit teaching of material based on a systematic sequence, attention to practice and ongoing review, high level of student-teacher interactions, the use of examples and nonexamples, and corrective feedback that is both prompt and targeted at the information that a student needs at any given time. Each of these strategies was then referred to at relevant points in the core of her presentation, which involved the language content involved in teaching children to read.

Dr Moats referred to multiple levels of language that are necessarily involved in a structured literacy approach, from phonemes and letter-sound relationships through to vocabulary and the structure of sentences, paragraphs and texts. She characterised reading as a 'moving target' – that is, some aspects of language are more relevant to the decoding aspects of literacy, and they play more of a part in the early years, while some aspects of language are more relevant to the comprehension, and they take more prominence in later years.

A good deal of the address was devoted to the earlier years of learning to read. Time constraints meant that Dr Moats left higher-level language issues as a tantalising promise of things (hopefully) to come. Her discussion explored what teachers need to know if they are to teach orthographic mapping explicitly. She argued that the speech-to-print process, where sounds are mapped to symbols, is essential as orthographic mapping develops. This means, firstly, that awareness of phonemes is absolutely necessary – the phonemes serve as 'parking spots' to anchor graphemes, and there are problems involved for learners when phonemic awareness is incomplete or 'out of focus'. Phonemes are difficult to isolate in the speech stream, and it is important for teachers – particularly teachers of a non-transparent language such as English, a language in which there is not a one-to-one match between letters and sounds – to understand the phonemic structure of words explicitly if they are to teach phoneme awareness competently.

A rough guide to developmental expectations for awareness of phonemes followed, with Dr Moats pointing out priorities for teachers and noting points where phoneme awareness and

phonics knowledge become reciprocal. Since English spelling represents other features of language beyond phonemes, she argued that teachers also have to understand other layers of language, including knowledge of spelling patterns and morpheme-based consistencies. The general progression she outlined – which she compared to layers of a cake that actually blend into each other – involved phonemes, graphemes, inflectional morphemes, syllable spelling, and derivational morphemes.

Dr Moats moved on to provide an example of a structured literacy lesson framework. She emphasised that all the aspects of language that are involved in any lesson are integrated rather than being treated separately. A structured literacy lesson could begin with reviewing a skill or rereading a familiar text, then presenting a new phoneme awareness listening task and teaching a new correspondence pattern at the level of grapheme-phoneme correspondences or morphemes. This could be followed by guided practice and feedback, including variations on the new material that had been taught. The lesson might move on to writing tasks that involve spelling the pattern words and reading a decodable text that allowed more practice of those pattern words. The design of word study lessons, Dr Moats pointed out, should take note of recurring patterns of spelling, schwa patterns that are characteristic of English has in polysyllabic words, and should cover the division of words into morphemes as well as syllables. She emphasised that using decodable books in the context of a structured literacy lesson serve as an opportunity for young children to practice what they have been taught.

Dr Moats provided some *non-examples* of a structured literacy approach. Her examples included treating words as visual strings of letters or letter shapes, rather than attending to their linguistic properties; guessing words and using 'sounding out' as a last resort in word identification, when no tools for sounding out have been provided; treating spelling as a process of guesswork; and being satisfied with approximations.

Dr Moats' final point was that explicit teaching of the structure of language has the potential to move the whole distribution of reading achievement upwards. This was a position that set the tone in all the conference venues for the rest of the presentations.

Agendas following the Keynote Address

Virtual Conference

14 January 2021
Attendees: 119

Speakers:

- Lyn Stone: *Error Patterns from Balanced Literacy - What it looks like when low quality instruction meets struggling readers*.
- Alison Clarke: *Phonemic awareness and proficiency*.
- Bill Hansberry: *Academic therapy - how to unbreak their hearts while remediating them. How to explain dyslexia to a kid and how to explain the ways we teach - multi sensory drill, phonological awareness, the complex English orthography, how we remember and why rehearsal is so important*.
- Stephanie Le Lievre, Natalie Campbell & Jasmyn Hall: *Supporting comprehension through quality text selection*.
- Olivia Connelly: *The primary to secondary pathway for students with language learning difficulties: A year-by-year guide in how to help your students attain their Year 12 and reach their potential*.
- Michael McKinnon: *Visible Mathematics - strategies to use in support of mathematical understanding involving a range of manipulatives to support all operations and their inverse operations for problem solving*.
- David Morkunas: *Evidence-based Strategies for Knowledge Acquisition in the Primary Mathematics Classroom*.

Australian Capital Territory

Organiser: Sally Robinson-Kooi
Venue: Monash Primary School
Date: 18 January 2021
Attendees: 60 (limited by COVID-19 restrictions)
The ACT conference was promoted by many, including Jen Cross from the Dyslexia Support Group Canberra and the Canberra-Goulburn diocese of Catholic Education. Interest was high, but due to COVID-safe protocols spaces were limited. Teachers, speech pathologists, academics and education consultants came together and were eager to share their journey and visions for the future in implementing the science of learning. Our thanks go to all involved, with particular thanks to the presenters, Monash Deputy Principal Todd McCoy, and caterer Sophie New.

ACT Speakers

- Opening address: *Dr Kym Simoncini (Associate Professor, Early Childhood and Primary Education, University of Canberra): Current barriers in translating reading research into practice in mainstream classrooms, possible solutions, and the growing momentum for evidence-based literacy instruction*.
- Sally Robinson-Kooi: *Explicit Instruction (EI) pedagogy*.
- (Keynote 2) Joel Weekes & Diana Ivancic: *A three-year targeted process in implementing scientific evidence-based pedagogy K-6 when establishing a new junior school*.
- Lin Meeks: *A comparison of decodable and predictable readers*.
- Eleanor McMillan: *Improving literacy learning in the secondary school*.
- Jacqui McKechnie: *Language-friendly classrooms*.

Attendees, ACT Conference Hub.

- Luisa Bornholm & Jane Espeland: *A phonemic awareness program for reading, spelling and writing in the junior primary classroom*.

Adelaide

Date: 14 January
Organiser: Jo Hirst
Venue: Fullarton House
Attendees: 20 (limited by COVD-19 restrictions)
In Adelaide, Fullarton House offered their premises as a hub to host attendees to view the Virtual Conference together (see list of Virtual Conference speakers above). The comment was made that attendees appreciated the opportunity to come together and connect, share experiences and offer support and collegiality to one another. There was much use made of the chat function on the day, and feedback was overwhelmingly positive.

Brisbane

Date: 15 January 2021
Organisers: Nicole Todd, Michael Roberts
Venue: Ascot State School
Attendees: 45 (limited by COVID-19 restrictions)
Live concurrent sessions involved mathematics, reading, spelling and implementing the science of learning across a whole school setting. Many of those who attended said they especially enjoyed being able to participate in professional development activities in person again. Several presenters commented on the high level of expertise of the attendees and altered their presentations and workshops accordingly. Attendees noted that they were able to take away practical ideas, along with the evidence to support practice, for their own classrooms. School leaders ended the day with further thoughts and renewed enthusiasm for implementing the science of reading in a whole school approach.

Brisbane Speakers:

- Arthur Cowell: *Implementing and supporting science of learning across a whole school setting*.
- Karene Janke & Danielle Sanders: *Implementing reading research into the classroom*.
- Lorraine Gaunt: *Scaffolding students with Learning Difficulties to participate in problem-based tasks (mathematics)*.
- Robyn Monaghan & Kate Andrew: *Read3: A Tier 3 literacy intervention for children at risk of severe literacy disorders*.
- Karen Kuskey, Danielle Sanders, & Karene Jankey: *Implementing an evidence-informed whole school approach to reading*.
- Camila Occhipinti: *The Science of Reading: From theory to practice in the Early Primary years*.
- Toni Hatten-Roberts: *Spelling Mastery: Why, what and how!*
- Melissa Pilcher: *Direct Instruction: Running intervention in high schools*.
- Nicole Todd: *Learning difficulties: Terms and resources across Australia State Educations Departments*.

Perth

Date: 23 January 2021
Organiser: Lorraine Hammond
Venue: Harrisdale Senior High School
Attendees: 300 (limited by COVID-19 restrictions)
The Perth LDA conference managed to achieve a face-to-face event just a week before a local COVID lockdown. There were two keynote speakers in addition to Louisa Moats, and 23 breakout sessions. The sessions included dedicated sessions to beginning teachers, primary and secondary teachers, high impact instruction, reading, spelling and maths under the common theme of research-informed classroom practice. Presenters were from remote, regional and metropolitan Perth schools. Some in their second year of teaching whilst others were very experienced; all were expert teachers in their own right.

Lorraine Hammond noted that with so many attendees, she drew heavily on support from Rachel, Tony, Damien, Ian, Kate, Brett and Janelle for support setting up and managing the day, as well as the generosity of the host school, and the presenters who willingly volunteered their time, and no doubt some of their holidays to prepare and share their expertise. Feedback was extremely positive, no doubt in part to the efforts of the presenters who kept a strong focus on practical classroom application. That there were two coffee vans and three food trucks on site for morning tea and lunch made for a great atmosphere in the school.

Perth Keynote Speakers:

- Leila Bothams: *The Harrisdale way of instruction*.
- Tim McDonald: *Establishing a positive learning environment from Day 1*.

Perth Breakout Session Speakers:

- Brett Reynolds: *Survival Tips for Your First Day in the Primary Classroom*.
- Helen Egeberg: *Demonisation to Restoration: The three R's of Trauma Informed Practice*.
- Stephanie Le Lievre, Natalie Campbell & Jasmyn Hall: *Supporting comprehension through quality primary text selection*.
- Bianca Cuticone & Blake Virgo: *Retrieval Practice – Upper Primary Math Review*.
- Debra Bright & Christie Simpson: *A whole school approach to improving reading and writing in secondary schools*.
- Simmone Pogorzelski: *Decodable Readers – Why and how?*
- Sonya Barrett: *How to choose and implement Direct Instruction programs in an inclusive learning environment*.

Attendees, Perth Conference Hub.

- Diana Rigg: *Gathering literacy data to inform your practice in the primary classroom*.
- Brooke Wardana: *The spelling rules you should know and how to teach them*.
- Sophie Davis: *Planning and delivering a Junior Primary Explicit Instruction maths lesson.*
- Lisa Ledger & Kayleigh Hart: *The role of coaching, professional learning and walk throughs at Baynton West Primary School*.
- Kelly Fullarton: *Effective Intervention for Students Struggling with Mathematics*.
- Carrie McCormack, Anika Brown, Caitlin Kerr Wilson & Joanna Schapel: *Getting an early start on the explicit teaching of literacy at Halls Creek District High School*.
- Ellie Ward: *Case Study of a High School's Literacy Intervention Program, including Corrective Reading*.
- Lyn Kovacic: Explicit Direct *Instruction for Mathematics Extension at Harrisdale SHS*.
- Sarah Gaudieri: *Diverse Learners: Specific Learning Disorders, ADHD, ASD and Sensory Processing in the classroom – what to look for, what to do*.
- Lorraine Hammond: *What is the Science of Reading?*
- Rachel Martial-Nguyen: *How to plan and deliver a Literacy Junior Primary Daily Review*.
- Natasha Doyle, Erin Turner & Jacob Slavin: *The Warriapendi School Improvement Journey*.
- Emma James: *Executive Function – Why is it important?*
- Luke Meader: *Explicit Instruction for High School*
- Jessica Colleu Terradas: *Spelling Mastery – The best 20 minutes you'll ever spend teaching spelling*.

Sydney

Date: 23 January 2021
Organisers: Troy Verey
Attendees: 82
The Sydney conference had been planned as a face-to-face event at Marsden State School, but due to a sudden COVID lockdown it was presented online, with hosting provided at the last minute by Training 24/7. Speakers recorded their presentations in record time, the virtual platform worked smoothly, and participants made enthusiastic use of the virtual chat function – even creating new buzz words during the day (readers may want to refer to Kathryn Thorburn for the meaning of 'dabble phase').

Sydney Speakers:

- Lyn Stone: *Learning to spell in a complex orthography – Can knowing better really help do better?*
- Roslyn Neilson: *Phonemic awareness*.
- Kathryn Thorburn: *Building the plane while flying… Why building the explicit teaching framework optimizes efficiency for staff and learning outcomes for students*.
- Justin Caban: *Explicit Instruction – Explanation techniques*.
- Dr. Danielle Colenbrander: *Opening gateways and making connections – Improving vocabulary knowledge to improve reading comprehension*.
- Dr. Alison Madelaine: *Levelling Up - Has the concept of Instructional Level in reading stood the test of time and evidence?*

Information about the LDA National January 2021 Conference was contributed by all LDA Council Members.

LDA Awards 2020

The annual LDA Awards are designed to recognise outstanding work in the field of learning difficulties. The Mona Tobias, Bruce Wicking, and Tertiary Student Awards are open to both members and non-members of LDA. The Rosemary Carter Award is open to current LDA Consultant Members.

Nominations for the 2021 awards are due in by the end of June 2021 – please see the LDA website for details about the criteria for all the awards and the procedures for nomination.

In 2020, only two of the four LDA awards were presented: the Mona Tobias Award to Dr Bartek Rajkowski, and the Rosemary Carter Award to Kristin Anthian. Both recipients presented entertaining and inspiring acceptance speeches at the 2020 AGM, and they have kindly provided edited versions of their presentations for publication here.

The Mona Tobias Award recognises a person who has made an outstanding contribution to Australian education of people with learning difficulties. It is given in memory of Mona Tobias, who was a great teacher and pioneer in helping children and adults with learning disabilities.

The Rosemary Carter Award recognises an outstanding Consultant Member who has contributed to the field of learning difficulties through work with students, their advocacy for students and their families, and through education of the wider community. An important criterion is demonstrable efforts to address equity issues by making their services more accessible to disadvantaged families. The Rosemary Carter Award is conferred in recognition of Rosemary Carter's enormous contribution to the association we now know as LDA, to the education of young, struggling students, and to the wise and valuable support she provided to parents and to colleagues over many decades.

About the Recipients

Dr Bartek Rajkowski, the recipient of the Mona Tobias award, is a speech and language pathologist with extensive experience in the assessment, identification and remediation of reading and spelling difficulties. He is the director of *Adelaide Speech Pathology Services* where he has led a team of like-minded clinicians since 2001.

Following his doctoral research investigating the relationship between phonological processing, orthographic processing and reading difficulties, Bartek developed a passion for helping teachers improve their knowledge of the structure of the English language, reading research and reading difficulties. He regularly presents his workshops to audiences around Australia and to speech & language pathology students as a casual lecturer at Flinders University. You can view one of his recent presentations on *LDA's Youtube Channel* by *clicking here*.

Bartek has been a member of LDA's governing council since 2016. He is a prominent advocate for students with learning difficulties and has been involved with various lobby groups, including the team that helped persuade the Australian Government to implement the Year 1 Phonics Check. Bartek is also the creator of *Reading Doctor*, a popular suite of evidence-based interactive teaching tools designed to improve literacy skills in students who are learning to read.

Kristin Anthian, the recipient of the Rosemary Carter award, has more than 30 years' experience working in education. Kristin holds two undergraduate teaching degrees, a Post Graduate diploma in Early Intervention and a Master's Degree in Special Education and Inclusion from the University of Melbourne.

Her working life in education has been eclectic and varied. This has comprised of classroom teaching, learning intervention and consultancy roles across a range of organisations. Some of these have included teaching indigenous students for Save the Children Fund; working as a pre-school field officer and assessment officer for local government identifying students at risk and supporting teacher inclusive practice; and working as an Educational Advisor for Gateways Support Services in a multidisciplinary Autism team in Early Intervention.

Kristin is a past council member of Learning Difficulties Australia (and a current accredited consultant member); is certified with the Centre for Effective Reading Instruction (CERI) and the International Dyslexia Association (IDA) in the US as a Structure Literacy Dyslexia Interventionist; and is a certified member of the Australian Institute of Special Educators (InSpEd).

Kristin became the lead author of 'Snappy Sounds' in 2019. Snappy Sounds is a tier 1 whole class Systematic Synthetic Phonics program, assessment tool and decodable books published by Macmillan International. She has subsequently trained teaching staff and speech pathologists on using Snappy Sounds in Melbourne, New South Wales and South Australia.

Currently, Kristin works as a private practitioner in seven schools west of Melbourne, providing learning support to students who are experiencing difficulties with the acquisition of reading, spelling, writing and mathematics.

She is passionate about employing explicit direct instruction and an evidence-based practice approach for students with language-based learning difficulties. She is equally fervent in supporting educators to ensure high quality teaching and early intervention for students with complex learning needs. As a tenacious lifelong learner herself, Kristin observes the Reading Leagues creed 'when we know better as teachers we do better!'

Nominations for the 2021 awards are due in by the end of June 2021 – please see the LDA website for details about the criteria for all the awards and the procedures for nomination.

Going Virtual: Providing learning support in lockdown

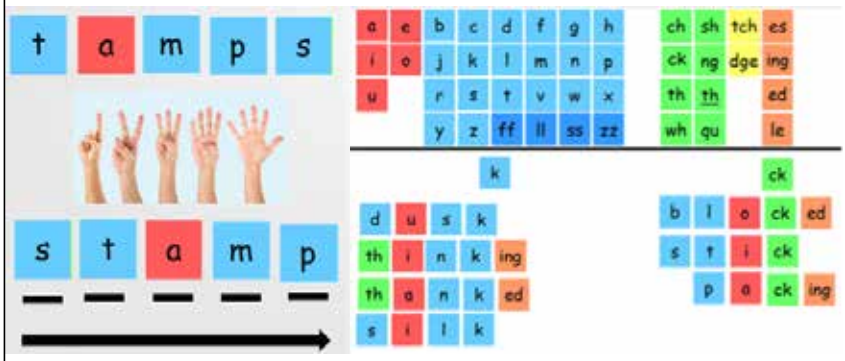
Kristin Anthian, the recipient of the Rosemary Carter Award at the LDA AGM in November 2020, provided an address about thriving as a teacher during the experience of COVID lock-down.

"A year like no other." "These are unprecedented times." Such catch phrases pervaded 2020. A new vocabulary materialised, including new meanings for words like *isolation, incubation period, social distancing, quarantine* and *lock down*. COVID-19 infected our oral and written language, as well flooding our minds. As teachers, our mission was to adjust rapidly to the impact of a global pandemic and to reduce the implications of moving away from face-to-face teaching to virtual teaching. So, for those of us who work in education and associated fields, the term *virtual learning* also preoccupied our vernacular.

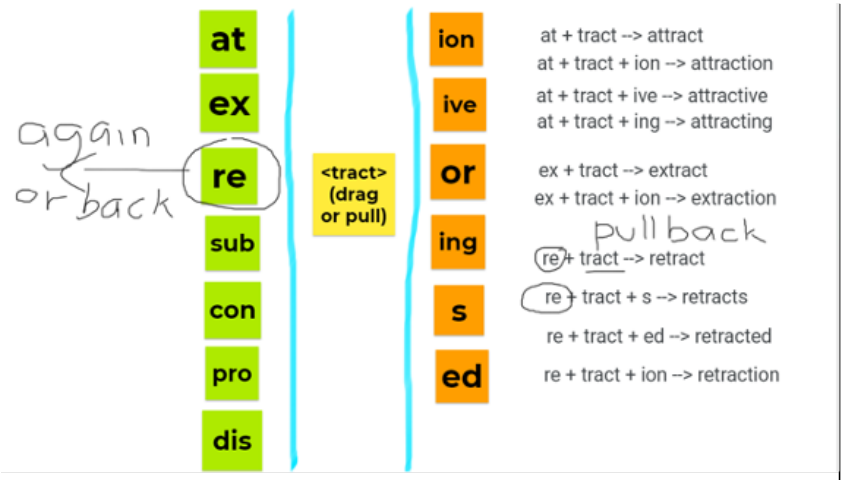
For Victorian teachers, and LDA Consultant members alike, we were plunged into seven months of lockdown during 2020. Although this was a relatively minor period in comparison to other regions combating the impact of COVID-19, we battened down the hatches and pushed forward. It resembled diving head-first into murky, obscure, unknown waters. With weariness we surfaced, gasping as we found our footing – along with our students and the families we supported. Hastily adjusting to teaching our most vulnerable of learners through online formats, we braced ourselves for the months ahead. Not surprisingly, many of us were complete novices in teaching using video conferencing platforms. I found myself drawing on my professional learning communities to extend my knowledge.

My own turnaround time was a weekend. On the Friday the news that schools would be closing was imminent and by the following Monday I had to be organised and relatively proficient to teach students remotely. Fortunately, with foresight, I had practiced one Zoom session with my fellow LDA Consultant colleagues and was planning to upskill my families that weekend. My disclaimer harmonised with the Victorian premier's tag line – we were indeed *"all in this together"*. We would require patience, proactivity and perseverance from each other to secure the best outcomes for our young people. The task was daunting to say the least. Although my knowledge and expertise in teaching virtually was very limited, I, like so many of my passionate and knowledgeable colleagues, was resolute in ensuring remote learning would be successful. All of a sudden, I understood all too well the anxiety our students with learning difficulties experience each and every day - that is, the anxiety they feel when the expectations of what they should be able to do are not commensurate with their skill set or knowledge base. Similarly, I understood that this is how they feel when they have not received explicit, direct instruction teaching as novice learners and are expected to be successful. I was rapidly re-entering the realm of the novice learner myself.

To my advantage, I had been gifted with 30 plus years of teaching experience, 20 of which had been within special education arenas and consultancy roles. I had also developed an unyielding commitment to evidence based and research informed intervention and practice. If I didn't know something that would assist my students then I wanted to know about it, and pronto. This meant that the teaching was not as daunting as the up-skilling on new technology.



Moveable graphemes for word building, sound swap and word sorts



Jamboard for morphology work

In writing this, as the grateful recipient of the LDA 2020 Rosemary Carter award, I reflected on what Rosemary's apprehensions and concerns may have been moving to remote learning and how she might have dealt with it. As a tenacious advocate for equity for disadvantaged youth, how might Rosemary have managed the challenges students experiencing learning difficulties faced when they did not have access to the internet and appropriate devices; when parents may also have had limited time or capacity to support their young learners at home; and when students themselves struggled to adapt rapidly to the changes thrust upon them? These were trials we were facing.

COVID-19 has had a disproportionate impact on the skill and knowledge development of already struggling students. Essentially, such students require the best of evidence-based teaching practices. Whether online or face-to-face, the essential skills and knowledge taught and the principles for teaching them remain consistent. The necessity to use what we know from cognitive learning science (such as spaced practice, interleaving, retrieval practice, cognitive load theory and explicit teaching) as well as reading and writing science (the Simple View of Reading and the Simple View of Writing) do not alter just because the learning platform does. Science is science regardless, and effective teaching is effective teaching.

Sentence dictation work

During the school lockdowns, however, some of the huge challenges faced at the families' end while supporting their children's remote learning included maintaining a clutter free workspace for students, preserving good lighting, reducing competing auditory or visual stimuli, and ensuring students had all materials ready for each lesson. Additionally, most families were complete novices at using Zoom, much like myself.

Each student was provided with a Google Drive folder to assist the transfer of new and completed work. A check list of ideas and top tips on how to set up a virtual workspace was given to each family to assist the transition. When students were provided with their first learning support session online, parents were encouraged to be in close proximity to assist with any technology trouble shooting. The initial session was heavily devoted to helping both the student and parent feel relaxed and become familiar with the various capabilities of Zoom. This included screen sharing; annotating; using an interactive whiteboard; downloading and uploading files into Google Drive; typing and using drawing tools on shared documents (pdfs, word and google docs); mouse control and keyboarding skills; and ensuring both their camera and microphones were switched on at all times.

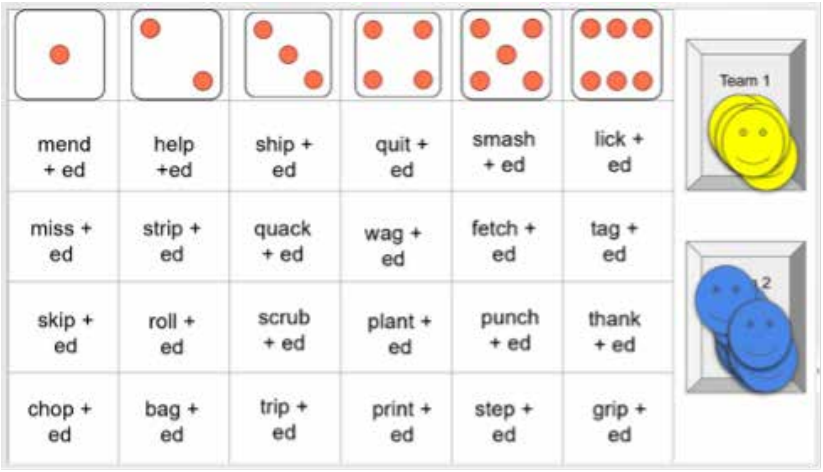
An analogue whiteboard and marker proved to be an easy, effective and low-cost way for me to view students' work quickly and to provide corrective feedback for writing and spelling tasks as required. It allowed for maintaining a relatively brisk pace of instruction as students could 'chin' their white board in front of their webcam on their device during 'checking for understanding'. They could also tilt their screen so that I could observe them writing in real time. Some students purchased a document camera, which added an additional layer of utility, and they were taught how to switch between cameras.

During remote learning many students frequently reported how much they missed their friends and felt lonely. As such, student's mental health and wellbeing was carefully monitored. We often began our sessions with conversational icebreakers including sharing jokes and memes. Given the considerable stress everyone was experiencing at this time, it was important to have elements of playfulness embedded.

Because students were sitting for substantial periods, screen fatigue and physical fatigue was combatted by including activity and movement breaks. A high level of interactivity through verbal, written, word building with moveable graphemes and game type responses was incorporated.

We made use of consistent access to electronic learning tools, and I have provided a few examples here (see images). The tools included various Chrome extensions, Microsoft Learning Tools and Microsoft Accessibility, Smart Notebook, UFLI (University of Florida Literacy Institute) virtual teaching hub, eBook decodable and content knowledge readers, PowerPoints for explicit teaching and review as well as games, Jam Board and Kami, Wheel of Names, Boom Cards, Mini Matrix word builder for morphology work, Book Widget, Word Wall, Flippity, Nessy and Reading Doctor.

In preparation for sessions, I ensured I learned keyboard shortcuts and had all files and internets sites open and ready to go before hand. This avoided any unnecessary delays that may inadvertently impact student attention. Dual monitors made it easy to toggle between files and internet sights. I purchased two document cameras, one that was focused on a large whiteboard behind me and another on a smaller white board next to me where I could also flip over pages of decodable readers and single word reading cards. A noise cancelling headset and microphone at my end guaranteed quality sound for students, and where possible they were also encouraged to wear a headset or ear buds.



PowerPoint game to practice suffixing conventions

While there were a number of challenges in learning to teach students with complex needs remotely, I was privileged in getting to know each family and student on a deeper level. This knowledge has secured stronger relationships with both students and parents upon returning to face-to-face learning support within schools. Many a conversation has recommenced regarding family pets and hobbies. What I have learnt as a practitioner during *"virtual teaching"* are tools and skills I will continue to use moving forward, to support students with learning difficulties post pandemic. My students have also learned much about their own resilience in times of great difficulty and how to harness the strengths they possess. I will continue to teach a number of students remotely, to help ensure equity to services in line with Rosemary Carter's enduring commitment to all learners.

Kristin Anthian is an Educational and Development Consultant, a Specialist Teacher Consultant Member and past Council Member of LDA. Kristin currently works as a private practitioner in schools west of Melbourne supporting students with learning difficulties and disabilities, and their teachers. Contact: Kristin.anthian@gmail.com

Aspiring to be a more effective teacher

Bartek Rajkowski, the recipient of the Mona Tobias Award at the LDA AGM in November 2020, provided an address in which he considered the key ingredients required for effective teaching, acknowledged the teachers who taught him the most, and reflected on the role Learning Difficulties Australia can play in helping all educators to improve their teaching.

I would like to express my sincere gratitude to the LDA Awards committee. I feel deeply honoured and humbled to receive an award that has previously been won by so many of my heroes.

Mona Tobias was a great teacher and pioneer in helping children and adults with learning difficulties. She worked in the Physically Handicapped Section of the Correspondence School of Victoria (CSV), a section that was established during the poliomyelitis epidemics of the 1930s. During this period, she became renowned for her ground-breaking work with children suffering from cerebral palsies, infantile paralysis, rheumatic fever and other conditions including learning difficulties. She was famous for her passion, her empathy and her knowledge, often visiting children in their homes with equipment she designed and provided for each individual child. Dr Henry Sinn, Consulting Paediatrician at the Royal Children's Hospital at the time, described her as, "...the most perfect example of what a teacher ought to be" (Preston & Campbell, 2019).

A perfect teacher. What an interesting and powerful idea, strangely abstract, yet directly relevant to all of us here today and to me as a speech & language pathologist, which is really just a fancy label for a special kind of teacher. As far as I'm concerned, we are all teachers. Researching Mona Tobias for this speech caused me to spend some time thinking about what exactly the formula for a perfect teacher would be. Perhaps attempting to define a perfect teacher could be useful in striving to become a better one.

So, I came up with what I think are the two core ingredients required for Elon Musk to create Perfect Teacher 3000™.

Firstly, you need an intense drive fuelled by *passion* for doing everything you can to empower your students. I've met so many incredible, passionate

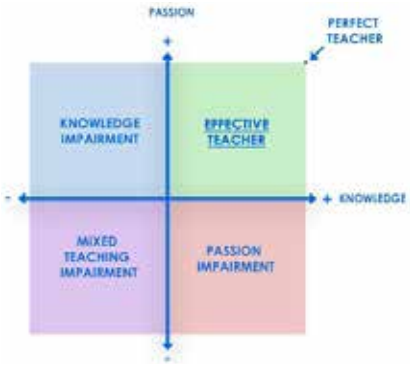


Fig. 1. The Simple View of Teaching. T = K x P, where T = Knowledge of effective teaching practices based on scientific research and P = Passion for empowering (Inspired by the Simple View of Reading, Gough & Tunmer, 1986)

teachers, many of them driven by personal experiences such as having kids with learning difficulties or being inspired by a teacher during their own education.

Secondly, you need *knowledge*. Indisputably, science is our best tool for acquiring knowledge. This knowledge needs to encompass an understanding of the science of learning but also the practical skills needed to implement teaching that really works.

Sorry, but I couldn't help myself: it's the *Simple View of Teaching*, where effective teaching is the product of knowledge and passion.

I've met teachers with enormous passion but little knowledge. An extreme example is the highly enthusiastic practitioner of a pseudoscientific approach. I've met a few of those. These teachers are ineffective due to a *knowledge impairment*.

I've also met teachers with tremendous knowledge who lack passion; they are burnt out for a multitude of reasons, usually to do with being overworked or other workplace frustrations. These teachers are ineffective due to a *passion impairment*.

Finally, I've met a few (but very few) without passion or knowledge. These teachers require the most intensive intervention. They are ineffective due to a *mixed teaching impairment*. Some of them shouldn't be teachers.

But it's the ones who have oodles of strength in both categories who hit the sweet spot. They're the effective teachers. These are the ones LDA is hoping to help produce. They are the Mona Tobias's of the future, and many of them are in our audience today.

So, our theoretical perfect teacher has an ideal combination of maximum passion for empowering students and complete knowledge of effective teaching practices based on scientific research. Of course, this ideal is impossible to attain, but effective teachers must have both factors to some extent; the more the better. If you don't, you're firing blanks.

Contemplating the concept of the 'perfect teacher' caused me to evaluate my own journey. I've been in private practice as a speech and language pathologist for 20 years, but I am most certainly not a perfect teacher.

I think as is common for many people's career choices, I became a speech and language pathologist due to a combination of factors, including the sad reality that my plan to be a rock star didn't eventuate. Upon deeper reflection, the one ingredient that I think led to the greatest degree of empathy and drive to improve outcomes for students is my having immigrated to Australia from Poland with my parents in 1981. I've always thought it was ironic that a guy who learnt to speak English at the age of 7 has ended up teaching English speakers about the English language, but it's no coincidence. I distinctly remember the feeling of being in a regular classroom in Melbourne without the ability to communicate. While I had the good fortune of experiencing significant communication issues temporarily, many of the students I work with have to endure life-long learning difficulties. I'm grateful for the experience as it led me to this fulfilling career. It also helped me to feel empathy towards my students, enabling me to maintain my passion.

Having said that, I regularly have moments during which the collective repetition of 20 years (multiplied by perhaps a thousand students worth) of attempting to establish skill automaticity gets repetitive and tiring, or I wonder if I'm really the right person to help the desperate, crying parent I've just met whose highly anxious child is jumping upside-down on my couch. In situations like these I try to remember that no matter how complex and challenging students seem, when you actually get to know them, they're almost always fantastic people with a lot more potential than they think they have. I'm blessed and thankful to lead a team of five equally inspired clinicians at Adelaide Speech Pathology Services. Having a sense of humour about significant challenges and the capacity to share them with like-minded colleagues seems to work wonders in terms of maintaining a passion for the job.

I've noticed that there's a symbiotic relationship between a teacher's passion for teaching and the level of knowledge they have about the science of teaching. These two factors seem correlated to a large extent. Increased knowledge leads to better outcomes for students, which drives the pursuit of more knowledge, and so on. In order to be an effective teacher, one also needs to be an effective student. Fortunately, the science of learning is fascinating. Although I often feel overwhelmed by just how much information there is to know in this field, that's precisely what keeps the pursuit of knowledge interesting.

I feel deeply indebted to the many teachers and colleagues who have provided me with key insights that have informed my practice and improved my knowledge. Many of these teachers are previous Mona Tobias Award winners or are affiliated with LDA in some way.

As a young speech & language pathologist in the late 90s, I was fascinated by why so many of the students we were seeing for speech and language issues also had literacy difficulties. Dr. Roslyn Neilson (Mona Tobias Award winner 2016) had developed an excellent phonological awareness test (the *Sutherland Phonological Awareness Test*, Neilson, 2003). Observing many students doing Ros' test was one of the factors that inspired me to read extensively about the ground-breaking research on the phonological deficit frequently found in students with reading difficulties. This led to a fascination with understanding the nature of the brain's neural representations of the speech sounds of language – called phonological representations – which were thought to be more poorly specified in students with dyslexia. I was especially interested in the relationship between these phonological representations, graphemic knowledge and the teaching of phonics.

One morning, at 2 a.m., I excitedly told my confused, sleeping wife that I'd come up with a model of phonological representations and I immediately wrote a 20-page essay in the toilet. To my surprise not long after that I began a doctoral study at Flinders University based on that original night-time essay. As part of my research, I discovered the incredible work of Professor Max Coltheart (Mona Tobias Award winner 2007), whose dual-route cascaded model (DRC) of reading aloud helped me to understand the crucial role of graphemic knowledge in reading unfamiliar words (Coltheart et al., 2001).

It was also around about this time that I decided to try to make a computer-based tool for teaching grapheme-phoneme correspondences that I could use in my speech pathology practice. My dream was to create an evidence-based tool that really helped kids to improve their reading skills and wasn't just a marketing gimmick. I'd always been interested in computers and had done some programming as a kid. I taught myself how to code and spent the next few years developing a prototype. I was lucky enough to be accepted to a South Australian Government initiative called the South Australian Young Entrepreneurs Scheme. I was allocated two mentors who were instrumental in helping me to convert my idea into reality. Much to my surprise, I was successful in applying for the Federal Government's 'Commercialising Emerging Technologies' grant after an interview in which the head of the grant scheme told me that my software prototype was exactly what his son needed to improve his reading ability. That gentleman became my business mentor, and his guidance was invaluable. I was lucky to win another couple of grants after that. Today, the program I developed in my bedroom is used by over 80,000 teachers, speech-language pathologists and parents. That's a lot of copies of my mouth on a screen! Most importantly, there are multiple studies demonstrating its efficacy and I'm very proud of the fact that it has recently been included in the Primary Reading Pledge (*https://fivefromfive.com.au/primary-reading-pledge/*).

I completed my doctorate in 2012 (Rajkowski, 2012). It was exhausting but highly rewarding. I'm forever grateful to my principal supervisor and favourite teacher, Dr. Willem van Steenbrugge for his expert guidance and ongoing friendship.

Following my doctorate, I developed a passion for helping teachers to improve their knowledge about the science of reading and I've been fortunate to be able to present on the topic to audiences all over Australia.

The work of multiple previous Mona Tobias Award winners has guided me and been instrumental in developing my knowledge and helping me to convince teachers that there is a need for change.

My presentations always feature a description of Australia's National Inquiry into the Teaching of Literacy, which was led by Dr Ken Rowe (Mona Tobias Award winner 2009), as well as a description of the now famous letter to then Minister for Education, Science and Training, Dr Brendan Nelson that led to the National Inquiry (see Rowe & NITL, 2015). The driving force behind that letter was 2012 Mona Tobias Award winner Dr Molly de Lemos. The work of Professor Pam Snow (Mona Tobias Award winner 2017) has helped me to understand and explain the devastating effects of illiteracy as well as to highlight the inseparable relationship between language and literacy. Furthermore, in addition to many of their other contributions, I'm grateful to Professor Pam Snow, 2018 Mona Tobias Award winner Alison Clarke, *Australian Journal of Learning Difficulties* (AJLD) editor Associate Professor Tanya Serry and Dr Roslyn Neilson for helping people to understand the crucial role speech & language pathologists play in helping students with literacy difficulties. I'd also like to acknowledge the invaluable work of Emeritus Professor Kevin Wheldall (Mona Tobias Award winner 2008) and Dr Jennifer Buckingham (Mona Tobias Award winner 2019), whose work has inspired so many. I'm especially thankful for their article, *Why Jaydon can't read* (Buckingham et al., 2013), which has been such a powerful tool in helping educators to understand why there is a need for change in the teaching of reading.

I hope it's clear from this brief summary just how much my development as a teacher of students with learning difficulties has benefitted from the teaching of previous Mona Tobias Award winners and others who are affiliated in some way with Learning Difficulties Australia (LDA). LDA has a crucial role to play in helping us all to be more effective teachers. LDA has the potential to improve outcomes for all students, including those with learning difficulties. As a young speech & language pathologist, I remember thinking that the *Bulletin* and the *Australian Journal of Learning Difficulties* were the only publications whose content was entirely relevant to my work. In addition to providing me with the latest research to inform practice, I felt connected to other professionals working in the field of education whose passion for empowering students inspired me and helped my colleagues and I to maintain our passion. I'd like to acknowledge 2010 Mona Tobias Award winner, Associate Professor and President of LDA Lorraine Hammond, as well as all of the members of LDA council and administration, past and present, for working tirelessly to ensure that LDA supports its members and promotes evidence-based practice.

In summary, I still aspire to be a more effective teacher. Perhaps the concept of a perfect teacher is useful in trying to achieve that goal. I have a lot to learn. My dream is that, like some of the heroes I have mentioned in this presentation, I can continue to develop and maintain the passion and knowledge required to improve student outcomes through effective instruction based on scientific research. I'm truly honoured to receive the Mona Tobias Award today and I'd like to dedicate it to all of the incredible teachers who helped me to improve my knowledge and maintain my passion. Thank you.

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In this issue of the Bulletin...

Ros Neilson, Editor, LDA Bulletin

This issue of the Bulletin starts with a rich sample of what LDA has been up to over the past few months: A summary of a hybrid national conference held in January 2021, and two interesting and entertaining summaries of presentations given by the recipients of the LDA 2020 Mona Tobias and Rosemary Carter awards, Bartek Rajkowski and Kristin Anthian. The closing section in this issue, the Consultants Report, reminds readers of the crucial service that the LDA consultant teachers provide.

The central theme of this issue is Comprehension – one of the basic dimensions of the Simple View of Reading. We all know intuitively what it feels like to understand (or not understand, or only partly understand) something that we read or hear, but the concept of 'comprehension' is difficult to define objectively, and it becomes even more elusive when we try to assess it. Comprehension presents teachers with huge challenges in the classroom. It is not only difficult to know when a student is not understanding and why they are not understanding, but also a challenge to know what to do to help. Supporting comprehension, however, is one of the most important things a teacher can do.

The special section on comprehension begins with an outline of a research project for which Dr Courtney Hattan won the 2019 International Literacy Association Award for Outstanding Dissertation in 2019. Courtney Hattan's article on Relational Reasoning introduces an innovative approach to helping students to make sense of what they read, giving teachers explicit guidelines about questions to ask during the reading of a text. The focus is not only on relating the new content to what students already know but also, significantly, on thinking about what was surprising, or different from, or the opposite of, what students already know. The approach involves subtle but very important changes from the traditional practice of 'activating prior knowledge', and it can open up stimulating possibilities for teachers and students.

Two articles follow that come to grips with the challenges of assessing comprehension. Firstly, Katrina Kelso discusses some of the findings from her Ph.D. research at Curtin University, which relates to the difficulty of identifying 'poor comprehenders' – children who have intact word recognition skills, but still have trouble understanding what they read. She explores the issue of the relationship between listening comprehension and reading comprehension, and she points out how seriously complicated it is to know what different tests are actually assessing. This leads to a practical suggestion for a screening protocol that may simplify the task of identifying poor comprehenders in the classroom.

Secondly, we are fortunate to have in this issue of the Bulletin (as we have in previous issues, with contributions from the MultiLit assessment team) an insight provided by a test designer into the decisions and research that took place *behind the scenes* of the publication of a standardised assessment tool. Nickola Wolf Nelson was a core part of the Test of Integrated Language and Literacy (TILLS™) team, and, in this article, with due disclosure of commercial interests, she teases out some of the theoretical and practical complexity of assessing comprehension within a test battery that allows test users to explore how students perform on the complex array of skills involved in the Simple View of Reading. Teachers will find the discussion useful not only as an overview of the test, but also as a reminder of all the factors that should be considered as we come to understand individual students' strengths and weaknesses in language and literacy.

Two book reviews follow - reviews of publications that are critical to teachers' understanding of what comprehension problems are and how they might be addressed. Lyn Stone reviews *The Knowledge Gap* by Natalie Wexler, and Ros Neilson reviews not only the book by Margaret McKeown and Isabel Beck, *Question the Author* (2nd Edition), but also a fascinating podcast recently produced by Ollie Lovell with Margaret McKeown herself.

Best wishes to all readers,

Ros

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Note from the Editor:

Introducing the Concept of Relational Reasoning

Ros Neilson
Editor, LDA Bulletin

How do we come to understand what the word 'bird' means? Answering this question involves exploring an amazing human ability: *relational reasoning*. Relational reasoning is a kind of thinking that we use virtually from birth, and that we carry on using throughout our lives. And importantly, relational reasoning is an ability that teachers can harness when they are helping students to understand what they read.

In the following article, Courtney Hattan has offered us four aspects of relational reasoning to consider, and provides evidence supporting the suggestion that explicit guidance in using this skill during the process of reading texts can help students achieve a level of comprehension that goes beyond the learning of disparate facts. These four aspects of reasoning are:

- Analogy – defined on the basis of similarity
- Anomaly – distinguished by underlying discrepancies
- Antimony – reflecting incompatibility
- Antithesis – involving consideration of inherently opposite relationships

Jablansky et al. (2016) have shown that children as young as five years of age can actually verbalise arguments that use all four of these kinds of reasoning. For comments on the Jablansky study, see *http://www.danielwillingham.com/daniel-willingham-science-and-education-blog/relational-reasoning-in-children*

The four relational reasoning terms introduced by Courtney Hattan may initially seem unfamiliar or challenging to teachers, but in fact they refer to thinking skills that we all use, consciously or unconsciously, all the time. I will try to illustrate the meaning of these terms by returning to the question of how young children learn what 'bird' means. It is an interesting example of how language involves coming to understand categories.

Young children have to move from their first encounter with what the people in their environment call a bird, towards the understanding of a category that includes living creatures or depictions of living creatures. Birds are creatures that display a huge variety of sizes and colours, may or may not fly or swim, and may or may not be friendly, but all have feathers and lay eggs.

For teachers coming to grips with the concept of relational reasoning, perhaps the most accessible aspect is **analogy** (Hofstader, 2013) – that is, noticing similarity amongst things. A very young child might first think that 'bird' refers to her fluffy toy, but when the word is also used in conjunction with the parrots that come to the veranda to be fed, her comprehension of the word has to expand to take note of the relevant similarities between her toy and the birds at hand – for example, the presence of wings.

The young child will also be starting to conceptualise the differences between her toy, the parrots, and the other interesting creatures in her life that her family also refer to as 'birds'. There are different ways in which differences crop up, and each of these, Hattan suggests, involves a different kind of reasoning.

The young child will start to appreciate **anomalies**, or discrepancies. The parrots and chickens in the back yard come to her to be fed, and it may be disappointing for her to realise that most other birds actually avoid humans. The recognition of this difference can lay the ground for the child to

come to understand the concept of domestication.

A conceptualisation of **antimony** will come as the young child realises there is something very important that is incompatible between her toy bird and the other birds in her life: the toy is not alive. The toy and the other birds are in mutually exclusive categories – living things versus inanimate objects.

The young child will also learn, with experience, that there are dimensions within the bird category that involve opposites. Some birds can fly and some birds can't; some birds are tame, and some are wild; some birds are very big and some are very small, and so on. When she understands these dimensional differences within the bird category, she is using **antithetical** reasoning.

The logical distinctions between the three types of relational differences – anomaly, antimony and antithesis – may at first be a bit challenging for teachers and students to keep in mind, but the general point is that it really helps to understand something by also understanding what it is NOT.

Hattan's article on relational reasoning invites teachers to come to grips with these terms in order to make explicit use of them in the classroom. The ideas presented probably demand some extra work to be put into teachers' lesson plans; this invitation goes far beyond merely the traditional strategy of 'activating background knowledge' to assist comprehension. What I see as particularly exciting in the relational reasoning strategies is that they have the potential to allow teachers to help children notice when and how their preconceptions *differ* from what they are reading. Exploring the full possibilities of differences can be a very productive exercise. When students notice and think about differences, they have the option of either revising their thinking and adding to what they know, or questioning what they are told. To be able to do this involves very important critical thinking.

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Activating background knowledge to support text comprehension

In this article **Dr Courtney Hattan** summarises research that she has conducted on *relational reasoning*, which is a technique that involves innovative ways to question students in order to deepen their understanding as they try to make sense of what they read.

"That paragraph was about the Roman Colosseum. It was a bit like our big sports stadium. But the gladiators fought to the death! We just watch football games."

Background

Reading comprehension is a complex process. Readers make sense of what they read by relating information in the text to what they already know. The comprehension process therefore necessitates an interaction between readers' background knowledge and the text(s) at hand (Kintsch, 1998), and it is critical that readers bring to mind their background knowledge during reading in order to support meaning making. The process of knowledge activation shapes what readers understand and learn from texts, and this can happen either automatically or with external guidance. Traditional methods of activating background knowledge in the classroom have, however, had mixed results in the research literature. For example, Peeck et al., (1982) found that mobilizing students' knowledge before reading was beneficial for comprehension, yet Dole et al., (1991) found that directly teaching topic-specific information before reading resulted in stronger text comprehension than activating students' prior knowledge. Further, other studies have demonstrated that background knowledge activation can reinforce, rather than shift, misunderstandings (Alvermann et al., 1985).

Given these conflicting results, I have conducted a series of empirical studies that investigated traditional and novel methods for activating readers' background knowledge, to further illuminate some of the benefits and pitfalls of varying instructional techniques.

Traditional knowledge activation techniques, such as asking students to share what they know about a topic prior to reading, have several potential flaws.

- First, these instructional techniques typically occur prior to reading, rather than encouraging readers to come back to their previous understandings throughout the reading process. Yet, models of text processing, such as Kintsch's Construction Integration Model (1998), posit that knowledge activation should occur continuously *during* reading.
- Second, many traditional knowledge activation techniques focus on topic-specific knowledge, rather than giving students permission to consider their personal experiences, metacognitive or strategic knowledge, or broader world knowledge. Activating topic-specific knowledge alone can lead to students feeling frustrated, particularly when their knowledge about a given topic is limited. Although topic knowledge is certainly crucial to text comprehension, it is not the only type of knowledge that can or should be activated during text processing (Hattan & Lupo, 2020).

- Finally, the traditional knowledge activation techniques consider how students' background knowledge is *similar* to the text at hand. Prompting students to reflect on how their background knowledge is *different from* or does not fit with the text, on the other hand, provides opportunities for students to more directly address potential misunderstandings.

In contrast to traditional knowledge activation techniques, teachers can use *relational reasoning* to support students in making different kinds of connections to texts. Relational reasoning is the ability to see patterns in and across different sources of information, and can be used to activate students' knowledge during reading (Alexander & the DRLRL, 2012).

There are four identified forms of relational reasoning which can be used as systematic prompts to support students' text comprehension. *Analogy* questions ask students to consider how

the text content is similar to something readers have seen read or heard in school or out of school, whereas *anomaly* questions ask students to recognize when something in the text is unusual or unexpected in comparison to readers' background knowledge. When we ask *antinomy* questions, we consider if there is something readers have seen or experienced that is completely different from or cannot fit with the text content, whereas *antithesis* questions consider how something in the text might be the opposite, reverse, or the other extreme of something that readers previously knew.

Table 1 summarises the four kinds of relational reasoning used in my research, with examples of typical questions that might be posed at points during the reading process.

Aspect of Relational Reasoning	Examples of questions or prompts
Analogy	What in this text is similar to something I have seen, read, or heard in school or out of school?
Anomaly	What in this text is unusual or surprising in comparison to something I have seen, read, or heard in school or out of school?
Antimony	What about the text could never be seen, read or heard today? What in this text could not fit with something I already know or an experience that I have had?
Antithesis	What in this text is the opposite of something I thought I knew, or something I have seen, read or heard in school or out of school?

Table 1. Kinds of relational reasoning

In the studies described below, the relational reasoning condition addressed the aforementioned concerns with traditional knowledge activation techniques by activating students' knowledge before and *during* text processing, encouraging students to consider both topic knowledge as well as other sources of knowledge, and prompting students to think about how what they already knew was different from the text content.

In the first study described, I directly compared the influence of a traditional activation technique to relational reasoning, as well as a control condition, on students' text comprehension. In the second study, I further investigated the usefulness of relational reasoning in supporting comprehension.

Research Context

The two studies summarized below draw on the same dataset. Data were collected at a public charter school in the rural south-eastern United States. Participants were 5th and 6th grade students, with a similar number of students who identified as male or female. Participants were primarily Black, with White, Multiethnic, Latinx, Native American, and Asian ethnicities represented as well. 149 students participated in the first study, with 44 participants in the second study.

Traditional Versus Novel Knowledge Activation Techniques

In the first study (Hattan & Alexander, 2020), students were assigned to one of three conditions: traditional knowledge activation, relational reasoning, or control.

- Students in the **traditional** condition were taught to activate their knowledge via a modified KWL or Know-Want to Know-Learned chart (Ogle, 1986). Students **mobilized their prior topic knowledge** before reading by responding to questions such as, "What do you already know about this topic?" and then shared what they learned about the topic after reading.
- Students in the **relational reasoning** condition responded to before-reading and during-reading prompts that corresponded to each of the four forms of relational reasoning, and which explicitly encouraged students to consider knowledge gleaned from anything they had seen, read, or heard in or out of school.
- Students in the **control** condition **annotated and summarized** the text and were not explicitly prompted to activate their prior knowledge.

During the instructional portion of the study, lessons followed the gradual release of responsibility as students were provided with models and opportunities to practice activating their knowledge or annotating the text, according to their assigned condition. Students in all three conditions read a text about ancient Greece during the instructional phase. After two days of instruction, students applied what they learned while reading a text about ancient Rome. The texts were purposefully chosen to present information on which the students had limited topic-specific knowledge. Before and during reading, students were asked to provide written responses to various prompts, according to their condition, and then completed a text-specific reading comprehension assessment, which included locate/recall, integrate/interpret, and critique/evaluate questions, following the National Assessment for Educational Progress (NAGB, 2010) framework.

The process of knowledge activation shapes what readers understand and learn from texts, and this can happen either automatically or with external guidance.

Results indicated that students in the relational reasoning condition performed statistically significantly better than students in either the traditional or control condition on overall comprehension. A similar pattern arose when the integrate/interpret and critique/evaluate questions were examined separately from the locate/recall questions. However, on the locate/recall (surface-level) questions, students in the relational reasoning condition performed significantly better than students in the traditional condition, but not significantly better than students in the control condition. Students in the control condition outperformed students in the traditional condition on the locate/recall questions. This could be because the control condition prompted students to closely attend to the text at hand, preparing students to respond appropriately to the surface-level questions.

A Closer Look at Relational Reasoning

The second study (Hattan, 2020a) more closely examined students' written responses to the before and during reading prompts for students who were assigned to the relational reasoning condition. The purpose was

to understand *why* relational reasoning was particularly facilitative of text comprehension, as well as consider some potential challenges that students might have in using relational reasoning during reading. Students' written responses were coded according to the number of idea units, their level of conceptual appropriateness and accuracy, and the source of knowledge (i.e., text, topic, or personal) that students relied on when responding. Further, differences in the conceptual match and accuracy of responses to the relational reasoning prompts were investigated for students who scored one standard deviation above or below the mean.

Prompting students to reflect on how their background knowledge is different from or does not fit with the text ... provides opportunities for students to ... directly address potential misunderstandings.

Results indicated that the number of written idea units, as well as the level of conceptual appropriateness, predicted comprehension performance. Further, students tended to integrate textual information with topic and personal knowledge in order to respond to the during-reading prompts (cf. the example cited at the beginning of this article, of a student thinking about differences between the Roman Colosseum and familiar present-day sporting arenas – which could then potentially lead into a deeper appreciation of crowd entertainment). Students who performed one standard deviation above or below the mean responded similarly to the during reading analogy and anomaly questions. However, the higher performing students included more accurate information in response to the antithesis and antinomy questions, when compared to their lower performing peers.

Instructional Implications

There are several important instructional implications that can be considered in light of the results of these two studies.

First, instructional prompts that are intended to facilitate knowledge activation can, indeed, support students' text comprehension. However, not all activation techniques work similarly for all students when reading all texts. In contrast to the findings from the first study (Hattan & Alexander, 2020), Lupo et al., (2019) found that more traditional forms of knowledge activation were beneficial for students. These conflicting findings suggest that educators might usefully consider implementing different instructional techniques to determine what works best in which contexts.

Second, as seen in the first study, our definition of comprehension and instructional purpose matters. In other words, text annotation and summarization were beneficial for students when they were asked to respond to locate/recall questions, but this technique was less useful when students had to go a step further to make inferences or evaluate the text. Therefore, there are situations when the instructional supports utilized in the control condition are useful, and they should not be thrown out entirely. However, if teachers would like students to go beyond text-specific information, additional scaffolds may be required.

Third, the during-reading component of the relational reasoning condition, which invited students to reflect on what they found surprising or unusual in the text, seemed to be particularly helpful for students, as demonstrated by the results of the second study.

However, in order for relational reasoning to be beneficial, educators should be sure that students respond to the prompts in conceptually appropriate ways. In other words, responses to antithetical questions need to actually include antithetical reasoning. Therefore, explicit instruction and practice on the four forms of relational reasoning could be beneficial. Additionally, results of the second study demonstrate the importance for students to activate *accurate* knowledge. However, this knowledge can be topic-specific or rely on personal experiences, and can, in fact, be tangentially rather than directly related to the text topic, as found in some of the qualitative analyses of students' responses.

Finally, teachers should encourage the integration of text, topic, and personal knowledge when responding to the during-reading relational reasoning prompts. As seen in the second study, students rarely relied on just one source of information, but instead were able to consider both the text in front of them as well as a range of different kinds of background knowledge when responding to the relational reasoning questions.

Future Directions

The results and implications of these studies provide a solid foundation for future work. Therefore, it is important that educators and researchers continue to interrogate questions related to knowledge activation and relational reasoning. Specifically, it is important to investigate whether similar results could be found for older or younger students, for students reading more or less familiar texts, or when reading additional genres. Further, it is necessary to investigate whether relational reasoning can help address students' prior misunderstandings or inaccurate knowledge, as this could be a potentially powerful way to help students adjust their knowledge base to consider newly presented information.

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The National Learning Difficulties Conference in Brisbane (16-17 September 2021) promises to be a great way to extend your classroom teaching skills to meet the learning needs of the students who struggle in your class – in a range of learning areas and levels. The conference is for classroom teachers and support teachers. Besides networking you will also have the opportunity to view resources from the suppliers and learn about the evidence-base to effective instructional practices.
The keynote speakers are:

- Professor Pamela Snow - Oral language skills and reading success: Leveraging the Simple View of Reading in primary and secondary classrooms
- Toni Hatten-Roberts - Beyond differentiation: Using the science of learning to teach all students.

This conference is a joint event by Learning Difficulties Australia, SpeldQld and Learning Support Teachers Association of Queensland. Further information is available through the LDA website.
Visit our Facebook page: https://www.facebook.com/LDConferenceQld

Assessing Poor Comprehenders: A guide for teachers

In this article, **Katrina Kelso**, **Anne Whitworth** and **Suze Leitão** discuss some of the findings from Katrina's Ph.D. research at Curtin University. They explore the issue of how students with poor reading comprehension can be identified in the classroom and discuss the practical implications of the assessments used.

This paper discusses a group of poor readers known as 'poor comprehenders'. These children have the opposite profile to children with 'classic' dyslexia, as they have difficulty understanding what they read in the presence of intact word reading skills. As a result of this profile, they tend to be less well identified. To assist in increasing awareness and identification of poor comprehenders, we will present an overview of the profile of their strengths and weaknesses, followed by a discussion of issues relating to assessment. We conclude with some practical ideas for identification and directions for future research.

Who are "Poor Comprehenders"?

The primary goal of reading is to comprehend what we read. Unsurprisingly, children who struggle to decode words accurately and read fluently, commonly referred to as having dyslexia, can have difficulty with reading comprehension (Snowling, 2013). This relationship between decoding and reading comprehension is represented in the Simple View of Reading (SVR) which proposes that reading comprehension is the product of decoding and language comprehension, and that skills in both these key components are necessary for comprehension to occur (Gough & Tunmer, 1986). Further, decoding is specific to reading while language comprehension skills are utilised in both listening and reading. Support has been found for the dissociation of the two components (Hoover & Gough, 1990), therefore, the SVR supports the existence of another group of poor readers, often referred to as poor comprehenders, who do not have difficulty with decoding but who have poor reading comprehension.

The reported prevalence of poor comprehenders has varied over time as selection criteria have differed between studies, however, current evidence suggests that around 7% of children in the middle primary school years can be classified as poor comprehenders (e.g., Elwér et al., 2015; Nation et al., 2010; Snowling, 2013). Further, this number increases across the school years from a reported prevalence of 16% in second grade (USA) to 30% in eighth grade amongst all children identified as having reading comprehension problems,

while data from the same study indicated that, within the general population, the prevalence of poor comprehenders increased from 3% in second grade to 9.6% in tenth grade (cited in Hogan et al., 2014). Nevertheless, as a result of being able to read aloud accurately and fluently these children tend to be poorly identified in schools, particularly as their oral language comprehension difficulties may not be overt enough to warrant referral for assessment (Catts et al., 2006; Kelso et al., 2020).

The Skill Profile of Poor Comprehenders

Decoding (or word reading as it is more frequently referred to in recent literature) and language comprehension have been found to explain almost all the variability in reading comprehension in school age children (e.g., Kim, 2017). While these two components underpin reading comprehension, they, in turn, rely on a number of subcomponent skills. Some of the key subcomponents that have been explored in the research

are represented in an expanded visual representation of the SVR in Figure 1 (Hogan et al., 2011) under the upper-level headings of 'word reading' and 'listening comprehension'. This research has consistently found that poor comprehenders do not have difficulties with word reading, as evident by their ability to read real and nonwords accurately and fluently, along with having intact letter knowledge and adequate phonological processing skills, at least once beyond the preschool years. In contrast, poor comprehenders have been found to have difficulty with a range of oral language skills, and longitudinal and retrospective studies have shown that these difficulties are present in the early years, although they may be at a subclinical level (e.g., Catts et al., 2006; Elwér et al., 2015; Nation et al., 2010).

... based on their informal judgement, only five of the 24 confirmed poor comprehenders were judged to be weak readers by their teacher.

As can be seen in Figure 1, the oral language skills that contribute to listening comprehension are separated into what are sometimes referred to as lower and higher-level language skills. The lower-level language skills of vocabulary and grammar are used to construct the literal meaning of a text and provide the foundation for the higher-level language skills of inferencing, knowledge of text structure and comprehension monitoring. These higher-level skills are needed for the reader to obtain an overall representation, or mental model, of the meaning of a text i.e., the reader goes beyond the literal meaning of the text and makes inferences from background knowledge to construct a deeper understanding of what the author has written. Exploration of these lower-level and higher-level language skills has found that not all poor comprehenders have difficulty in all skill areas (Nation et al., 2004), however, two broad hypotheses have emerged as to the source of the reading comprehension difficulties of poor comprehenders. Nation and colleagues have identified weaknesses on various measures of vocabulary and grammar (e.g., Nation et al., 2004, 2010) along with higher-level language difficulties, while Oakhill, Cain and colleagues have identified groups of poor comprehenders with only higher-level language difficulties (see Oakhill et al., 2015).

Assessment Methods for Identifying Poor Comprehenders

With so many potential areas of difficulty, and so much variation between poor comprehenders, it is not easy to effectively identify these children within the classroom context. Kelso et al. (2020) investigated using a short testing protocol based on the components of the SVR, consisting of two oral language tasks: (1) a phonological awareness task, the Elision subtest from the *Comprehensive Test of Phonological Processing-2* (CTOPP-2: Wagner et al., 2013), and (2) a listening comprehension task, the Understanding Spoken Paragraphs subtest from the *Clinical Evaluation of Language Fundamentals–4* (CELF-4) Australian Edition (Semel et al., 2006). Follow-up testing on reading tasks to confirm a poor comprehender profile found that children in School Years 3-6 were over-identified by the two oral tasks (Kelso et al., 2020). The findings suggested that the two-phase approach could be effective in identifying poor comprehenders and reduce the time spent in testing. It was unclear whether the short testing protocol missed potential poor comprehenders, as it was beyond the scope of the study to assess the reading skills of children who did not meet the criteria to move into the next phase of testing. Key findings therefore included (a) reading needed to be tested to confirm that a child was a poor comprehender, and (b) based on their informal judgement, only five of the 24 confirmed poor comprehenders were judged to be weak readers by their teacher (Kelso et al., 2020).

Reading Comprehension Tests

Selecting which reading comprehension test to use to identify poor comprehenders is not straightforward, as tests can differ in terms of what component contributes most to reading comprehension, such as word reading, listening comprehension, memory, and background knowledge (see Oakhill et al., 2015, for an overview). Further, the component that contributes can vary *within* a test, so that word recognition can explain more or less of the variance in reading comprehension for a child that scores at the 10th percentile than it does for a child who performs at the 90th percentile on the same test (Hua & Keenan, 2017). Tests can also vary in format in relation to their text type (e.g., narrative, expository, fiction, nonfiction), and length of the texts used (sentence, paragraph, passage). The tests may require texts to be read aloud or silently; they may

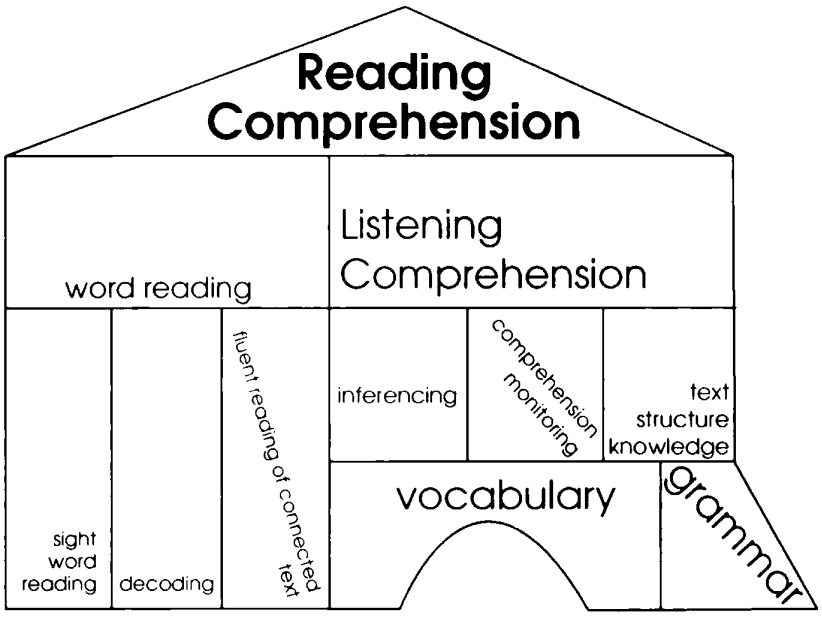

Figure 1. Visual representation of the Simple View of Reading including direct and indirect links to reading comprehension through word reading and listening comprehension

Note. From "Increasing Higher Level Language Skills to Improve Reading Comprehension" by Hogan et al., (2011). Focus on Exceptional Children, 44(3), p. 2. (https://digitalcommons.unl.edu/specedfacpub/79/). Reprinted with permission.

be timed or untimed; and response format may involve picture selection, retell, multiple choice or opened ended questions, and cloze tasks (Collins & Lindström, 2021). Comprehension tests with an open-ended question format and longer texts are considered to be the most sensitive method of assessing comprehension, as answers are not cued by response options. There are, however, disadvantages to this approach, in particular that these tests usually need to be administered individually and can penalise children with expressive language difficulties (Oakhill et al., 2015). Best practice also suggests assessing real and nonword reading on a test separate to reading comprehension.

If potential reading comprehension difficulties are identified, referral to a speech-language pathologist for more detailed testing of oral language skills that can inform intervention may be warranted.

The most commonly used standardised reading comprehension test in Australia for many years was the *Neale Analysis of Reading Ability-3* (NARA-3: Neale, 1999), but in recent years many Education Departments have accepted the *York Assessment of Reading for Comprehension (Primary)* Australian Edition (YARC-P: Snowling et al., 2012). The YARC-P has the advantage of being quicker to administer than the NARA-3 as every child reads and answers questions on only two passages, rather than continuing to read passages until the specified number of reading accuracy errors are made or all passages are read, as is required with the NARA-3. Colenbrander et al. (2016) compared Form 1 of the NARA-3 and Form A of the YARC-P and found that, while comprehension scores were more dependent on decoding skills on the NARA-3 than on the YARC-P, the NARA-3 diagnosed more poor comprehenders. Possible explanations were that (1) more passages were read on the NARA-3, with a greater number of comprehension questions answered, and (2) that the higher-level passages were more complex on the NARA-3 than on the YARC-P. This is particularly relevant to poor comprehenders with intact word reading skills, because on the NARA-3 they are likely to read more of the complex higher-level comprehension passages. Overall, however, the consistency of diagnosis between the two tests was relatively high compared with previous research (Colenbrander et al., 2016).

Kelso et al., (2020) selected the YARC-P as their reading comprehension measure as it allows for analysis of performance on the different types of comprehension questions (e.g., literal, vocabulary, inference). This might provide useful insights into a child's comprehension problems that are not available from an overall test score and, in turn, might inform intervention and prove useful in helping a teacher to determine whether or not the relatively higher-order comprehension skills are more affected. Another criterion referenced, rather than norm referenced, test that provides this breakdown of question types is the PROBE-2 (Parkin & Parkin, 2011).

Other Approaches to Assessment

While reading comprehension tests with open-ended questions present as the best way to identify poor comprehenders, they usually need to be administered individually and are therefore time consuming to administer, so other more practical methods of identification, based on the research, need to be considered for the classroom. The first step, at all times, should be for teachers to be on the look-out for students who fail to engage in classroom discussions about texts, or who ask questions unrelated to the current topic. This is not a straightforward expectation to place on teachers; recall that only a small fraction of the students identified as poor comprehenders in the Kelso (2020) study had been informally identified by their teachers as poor readers.

Some suggestions for more systematic assessment are outlined below. Further ideas on ways to assess subcomponent language skills are provided in Oakhill et al. (2015).

1. As listening comprehension has been found to be highly correlated with reading comprehension, texts could be read aloud by the class teacher. This approach would be more practical with younger children when comprehension is likely to be constrained by word reading ability. Some reading comprehension tests have parallel versions, so one set of passages could be presented orally and, with older children considered to be at risk, follow-up testing of reading comprehension carried out using the alternate version.
2. Children could write their answers to open-ended questions, although this is less practical with younger children, as well as for with those with expressive language difficulties. If the texts are read aloud, a written copy would also need to be available for the child to refer to as they answer the questions.
3. Children could be asked to provide a short oral and/or written summary of a text they have read. This needs to be a cohesive summary of the main ideas of the text, rather than a verbatim recount of the entire text.
4. After a child has read a text, they could be asked to respond to higher-level questions requiring them to make predictions and inferences, or evaluate the text. Blank et al. (1978) have provided examples of four levels of questions relating to children's reading books, including both lower-and higher-order thinking skills, and this type of questioning could be adapted for use used with children in the early childhood years and beyond.
5. Finally, while multiple-choice format tests can be administered to whole classes more readily, teachers need to be aware of the limitations of this type of test and be able to identify different question types (e.g., literal, inferential) to allow response analysis and/or follow-up.

Ideally comprehension assessment should assess all skill areas, but this is rarely possible in the classroom. If potential reading comprehension difficulties are identified, referral to a speech-language pathologist for more detailed testing of oral language skills that can inform intervention may be warranted.

Future Research

Using a short testing protocol, as explored by Kelso et al. (2020), is an option for an effective way to initially identify poor comprehenders. Further research, however, is required to see if more reliable tasks can be found, whether they can be administered at a small group or whole class level, and to determine whether poor comprehenders are under identified using this approach.

The other key area where research is required is intervention as, while a great deal is now known about the language profile of poor comprehenders, there is still much to be learned about effective interventions for this subgroup of poor readers.

To find out more about reading comprehension and interventions further resources can be found at: *https://www.cem.org/blog/10-essential-reads-to-improve-reading-comprehension/*

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Katrina Kelso along with Associate Professors Suze Leitão and Anne Whitworth have a broad programme of research investigating language and communication.

Much of their work can be accessed via the Curtin University website or https://www.languageandliteracyinyoungpeople.com/

Overcoming challenges in developing tests of language comprehension

In this article, **Professor Emerita Nickola Wolf Nelson** teases out some of the complexity of the concept of comprehension, and provides an account of some of the thinking and research that went into the development of the TILLS™ – a test battery that was developed with the aim of integrating the assessment of oral language and literacy skills.

Abstract

Research has identified multiple factors contributing to language comprehension, including vocabulary, grammar, and discourse, as well as inferencing and comprehension monitoring. Challenges for measuring comprehension include reducing influence of prior knowledge and using Item Response Theory methods to enhance validity and reliability. Examples from the *Test of Integrated Language and Literacy Skills*™ (TILLS™; Nelson, Plante, Helm-Estabrooks, & Hotz, 2016) illustrate evidence-based practices in test development. Applications are described for interpreting results by applying the quadrant model to identify dyslexia, specific comprehension deficit, and oral-written developmental language disorders.

Language comprehension is both difficult to define and challenging to measure. When a listener says, "I understand," it could mean anything from "I understand your directions," to "I understand why you were so angry," to "I understand the complex academic concepts that you just explained." These examples illustrate how comprehension reflects more than the literal decoding of words in sentences and sentences in discourse. Social communication and academic learning both depend on understanding abstract meanings as well as concrete ones, and that involves the ability to infer unstated or deeper meanings.

Although comprehension involves more than language, language abilities serve as gatekeeper to cognitive, emotional, and academic understanding. Comprehension occurs when someone uses language skills to construct a mental representation of people, objects, actions, and relationships (logical, spatial, temporal, social, emotional) that match those referenced and syntactically encoded with vocabulary selected by the message's creator. In addition to language skills, comprehension requires basic cognitive resources of focused attention and short-term memory, as well as higher-level executive functions for inferencing and comprehension monitoring. The possibility that any of these linguistic or nonlinguistic abilities might be faulty or inadequate complicates the challenge of defining and measuring comprehension.

Components of comprehension and what can go wrong

Measuring language comprehension starts with identification of factors involved. Recognising this, the Language and Reading Research Consortium (LARRC, 2015) investigated dimensions of comprehension from preschool through Grade 3. Findings showed a single-factor model during the preschool years, which then split into two factors by Grades 1 and 2: lower-level language (vocabulary and grammar) and discourse (narrative language, listening comprehension, and inferencing). The model then split into three factors by Grade 3: vocabulary, grammar, and discourse. Other research has concurred that listening comprehension can be predicted by inferencing and grammatical skill, as well as by verbal working memory (Lervåg, Hulme, & Melby-Lervåg, 2018) and that language comprehension and expression are best viewed as two sides of the same coin (LARRC, 2017). When something goes wrong, as it can for students with specific learning difficulties or developmental language disorders (DLD), comprehension is rarely simply absent. Rather, students with comprehension deficits tend to transpose, misunderstand, or forget certain components, constructing meanings that are inexact or "slightly off," and those traits can be observed in their expressive language as well. That is, poor comprehenders have difficulty not just with comprehension, but with oral expression too (Nation, Clarke, Marshall, & Durand, 2004).

Research also has shown close connections between listening

comprehension and reading comprehension, both of which include problems in making inferences, understanding words in context, learning new words, connecting ideas in text, remembering verbal information, and monitoring comprehension (Nation, 2019). According to the Simple View of Reading (Gough & Tunmer, 1986; Tunmer & Chapman, 2012), skilled reading is the product of word recognition and listening comprehension. As shown in Figure 1, problems with word recognition alone suggest dyslexia; problems with listening comprehension alone suggest specific comprehension deficits; and problems with both factors indicate oral-written language disorders (Adlof & Hogan, 2018; Bishop & Snowling, 2004; Catts, Adlof, Hogan, & Ellis-Weismer, 2005). Because reading comprehension may be affected by problems with reading decoding, whereas listening comprehension is not, a profile with reading comprehension lower than listening comprehension may be a diagnostic marker for dyslexia (Badian, 1999; Stanovich, 1994).

Overcoming challenges in designing formal comprehension measures

As authors, our goal in designing the *Test of Integrated Language and Literacy Skills*™ (TILLS™; Nelson, Plante, Helm-Estabrooks, & Hotz, 2016) was to develop a test for school-age children and adolescents from ages 6 through 18 years that would be valid for three purposes: (1) identifying language/literacy disorders; (2) profiling language strengths and weaknesses; and (3) tracking change over time. This discussion focuses on the goal to profile strengths and weaknesses to inform diagnostic decisions and intervention planning. To do so required the development of measures to assess oral and written language along the two dimensions of the quadrant model, as shown in Figure 1. Sound and word level (phonological) skills needed to be assessed so they could be categorized as low or high (left or right). Vocabulary and sentence/discourse level (nonphonological) skills needed to be assessed so they could be categorized as low or high (bottom or top).

Composite scores to define these two dimensions using TILLS subtest standard scores are constituted as follows:

- **Sound/word subtest scores** come from Phonemic Awareness, Nonword Repetition, Nonword Reading, Nonword Spelling, Reading Fluency, and Written Expression-Word.
- **Sentence/discourse and vocabulary subtest scores** come from Vocabulary Awareness, Listening Comprehension, Following Directions, Story Retelling, Delayed Story Retellings, Social Communication, Reading Comprehension, Written Expression-Sentence, and Written Expression-Discourse.

Test design requires attention to both validity and reliability, and these present challenges when tests of comprehension are being constructed. Construct validity for comprehension tasks in the school-age years depends on how well they reflect linguistic characteristics of the academic curriculum; however, comprehension tests should assess language, and not content knowledge. Additionally, measures must meet reliability standards of internal consistency, but without narrowing their focus to the degree they no longer represent the multi-faceted nature of comprehension.

Vocabulary is a major component of comprehension, but it is also prone to socio-linguistic bias. The TILLS uses a Vocabulary Awareness (VA) subtest to assess semantic skills beyond vocabulary size, which is particularly sensitive to socio-economic status (Hoff, 2003). Words are presented three per page in print. Examiners read and may repeat the words to reduce dependence on auditory memory and reading skill. Print allows the assessment of vocabulary that is difficult to picture and that may have multiple meanings. An example is *fan*, *propeller*, *admirer*. The student's job is to pick two of the words that go together and tell why (e.g., *fan* and *propeller* both have blades that turn around [part-whole relationship]); and then to pick a different two and tell why (e.g., *fan* and *admirer* both mean to like someone [synonymy]). Correct responses depend on cognitive-linguistic flexibility for searching one's inner lexicon, as well as ability to explain semantic relationships.

Using expository discourse in assessment can introduce another dimension of comprehension, with a distinctive range of grammatical structures typically being found in expository discourse. The use of expository discourse is problematic, however, because it could allow questions to be answered based on prior knowledge rather than comprehension of the language in the passage. To avoid this problem in TILLS, we created parallel Listening Comprehension (LC) and Reading Comprehension (RC) subtests to mirror the syntax of expository discourse but using fictional "stories" whose content could not be previously known (example in Figure 2).

Instructions for answering the accompanying yes, no, maybe questions

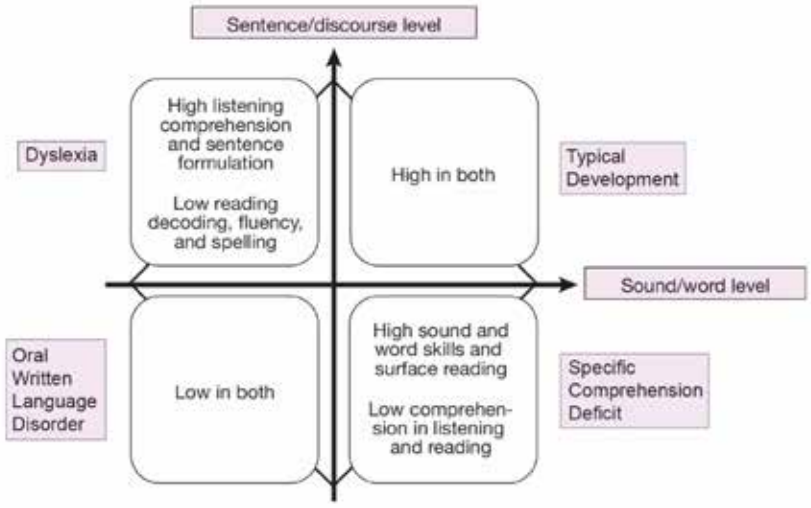

Figure 1. Quadrant model illustrating how high-low patterns of sound/word and sentence/discourse skills may inform interpretation of assessment results from the TILLS[1].

[1]From Nelson et al. (2016). *Test of Integrated Language and Literacy Skills™ (TILLS™) Report Writing Template*. © 2016 Brookes Publishing. Reprinted by permission. All rights reserved. Test of Integrated Language and Literacy Skills™ and TILLS™ are trademarks of Paul H. Brookes Publishing Co. TILLS is available in Australia from Woodslane (https://www.woodslane.com.au)

5. We thought it was strange that the art teacher told us to clean the brushes before we started painting. But when we realized they really needed it, we followed his instructions.					
a. Were the brushes dirty at first?	**(Y)**	N	M	0	1
b. Did we clean the brushes after we finished?	Y	N	**(M)**	0	1
c. Was the art teacher a woman?	Y	**(N)**	M	0	1

Figure 2. Example item from the Listening Comprehension subtest of the TILLS[1].

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are as follows:

> *"Tell me 'yes' if you are sure the answer is 'yes.' Tell me 'no' if you are sure the answer is 'no.' If the story doesn't clearly tell you the answer, tell me 'maybe.' Some stories will not have all three kinds of answers—yes, no, and maybe. Here's one for practice.* (p. 15, TILLS™ Examiner Record Form)

The LC subtest is given immediately prior to the RC subtest. This allows students to learn the response format. They then read the RC stories in their response booklets and answer questions independently, by circling *Yes*, *No*, or *Maybe*. Examiners instruct students to read the first story aloud so that they can observe the student's word-level reading skills and discontinue this test if the student makes 7 or more uncorrected errors. The potential problem that students may guess correct answers was addressed during pilot testing for the TILLS by subjecting items to Item Response Theory (IRT) analysis, which allows statisticians to identify items with response patterns indicative of guessing so they can be culled. We also used IRT and Differential Item Functioning to cull items that were selectively difficult for members of diverse cultural-linguistic communities or girls versus boys. Such methods are better for controlling bias than simply including population-based proportions of racial-ethnic groups in the standardization sample. Because of these steps, average to high scores on the LC and RC subtests of the TILLS can be interpreted with confidence as valid reflections of a student's average to high ability to understand complex syntax relative to same-age peers, perhaps despite reading-decoding errors.

Other TILLS subtests focus on narrative, procedural, and social-interaction discourse. Narrative discourse abilities are assessed with the Story Retelling subtest. Students listen to the examiner read one of two age-appropriate stories, retell it as closely as possible, and answer four comprehension questions. Scoring is based on the number of content units included that maintain meaning, even if wording is rephrased. Answers to comprehension questions do not contribute to quantitative scoring but can indicate how well students can draw inferences and understand idioms. The Delayed Story Retelling subtest is administered 20-30 minutes after the initial retelling, primarily to assess verbal memory over a slightly longer period of time.

The Following Directions subtest measures comprehension of procedural discourse, as well as verbal memory. Students cover up rows of test images (illustrated in Figure 3) while listening to instructions. They uncover each item and respond when the examiner says, "Go." Responses require comprehension, visualization, and memory for procedural language, including references to temporal sequence and spatial relationships.

The Social Communication subtest assesses discourse skills for social interaction. A practice item is used to demonstrate acting a scene, after which test scenarios are presented in print and read aloud by the examiner. An example is, *"Rachel wants to politely turn down an invitation to a party she thinks will be boring. What do you think Rachel would say?"* Items are scored correct if the student's spoken response demonstrates both comprehension of the key vocabulary (representing communicative intentions) and use of pragmatically appropriate phrasing and intonation.

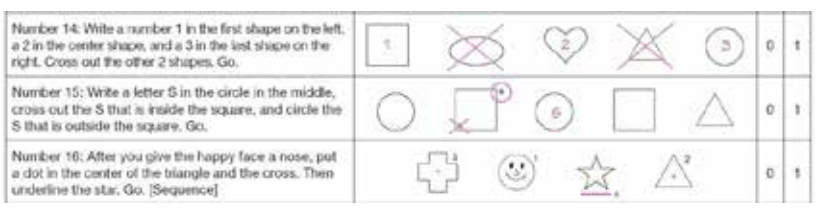

Figure 3. Example items from the Following Directions subtest of the TILLS[1].

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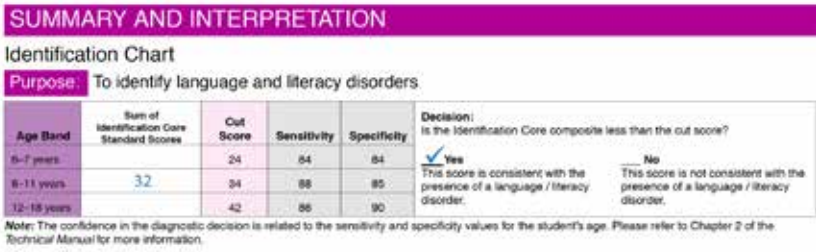
Interpreting profiles and conclusions

One of the advantages of standardizing a comprehensive test battery on a common normative sample, as done with the TILLS, is that subtest scores can be compared directly. Identifying the presence of language/literacy disorder involves comparing the student's Identification Core Score to the cut score for the student's age (see Figure 4). This can be done by hand or using the TILLS Easy-Score™ application (available at *https://www.tillseasyscore.com/testers/new*). To identify profiles from the quadrant model (illustrated in Figure 1) requires comparison of Sound/Word and Sentence/Discourse composite scores. Interpretations for this function are explained in the Report Writing templates that can be downloaded by registering at *https://tillstest.com/restricted-content-gateway/*.

As noted above, the classical profile for dyslexia is for Listening Comprehension to be higher than Reading Comprehension (Badian, 1999; Stanovich, 1994), with the sentence/discourse composite score "high" (> 85) and the sound/word composite score "low" (< 85). However, a student with a pattern of poor reading decoding but good listening comprehension, which is typical of classical dyslexia, still may earn a Sentence/Discourse composite score lower than 85. That is because problems with reading decoding and spelling may lower the Reading Comprehension and Written Expression scores that contribute to the Sentence/Discourse composite. In such cases, examiners should apply their clinical interpretation skills to explain why the student still might have a form of dyslexia.

High Sound/Word level scores accompanied by low Sentence/Discourse scores, on the other hand, is a pattern that indicates a specific comprehension deficit. The Identification Core score in Figure 4 and profile of subtest scores in Figure 5



SUMMARY AND INTERPRETATION

Identification Chart

Purpose: To identify language and literacy disorders

Age Band	Sum of Identification Core Standard Scores	Cut Score	Sensitivity	Specificity	Decision: Is the Identification Core composite less than the cut score?
6–7 years		24	84	84	✓ Yes: This score is consistent with the presence of a language / literacy disorder.
8–11 years	32	34	88	85	___ No: This score is not consistent with the presence of a language / literacy disorder.
12–18 years		42	86	90	

Note: The confidence in the diagnostic decision is related to the sensitivity and specificity values for the student's age. Please refer to Chapter 2 of the *Technical Manual* for more information.

Figure 4. The TILLS[1] Identification Chart[2] for the 11-year-old student whose profile appears in Figure 5, showing an Identification Core score lower than the age-determined cut score, and indicating the presence of a language/literacy disorder.

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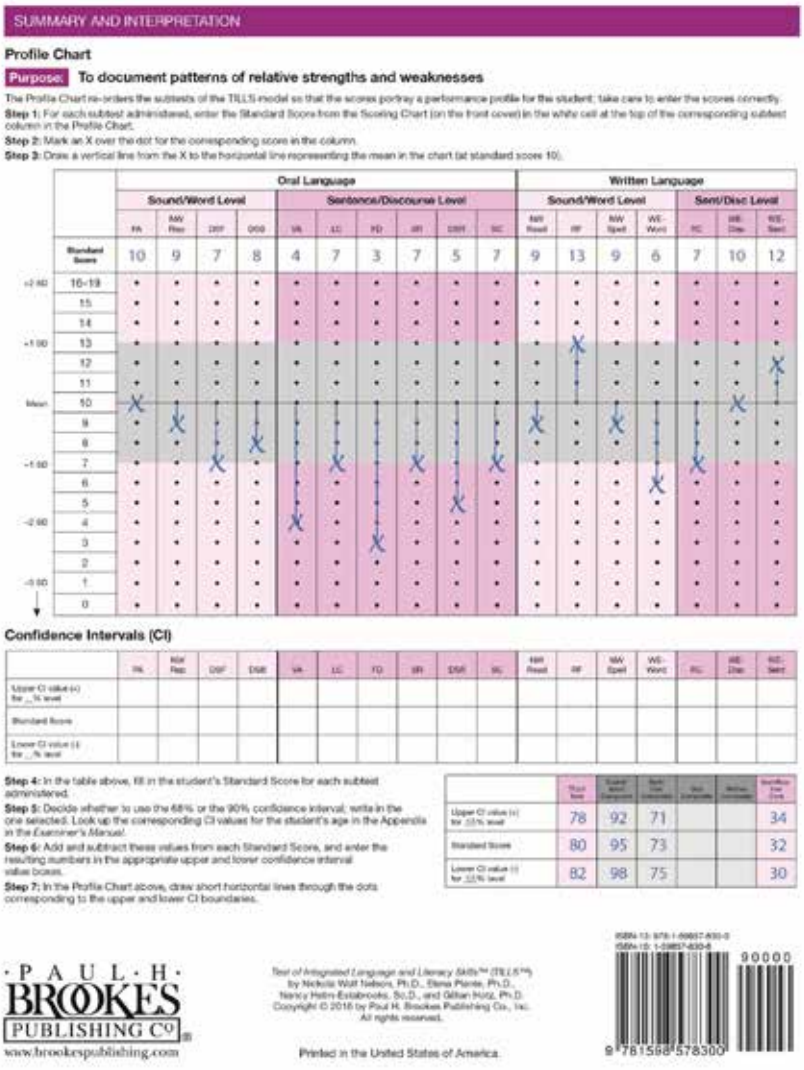
[2]This Identification Chart was created with the TILLS Easy-Score™ application, which can be accessed at https://www.tillseasyscore.com/testers/new.



SUMMARY AND INTERPRETATION

Profile Chart

Purpose: To document patterns of relative strengths and weaknesses

Oral Language: Sound/Word Level (PA, NW Rep, DSF, DSB); Sentence/Discourse Level (VA, LC, FD, SR, DSR, SC)

Written Language: Sound/Word Level (NW Read, RF, NW Spell, WE-Word); Sent/Disc Level (RC, WE-Disc, WE-Sent)

Standard Score	10	9	7	8	4	7	3	7	5	7	9	13	9	6	7	10	12
+2 SD	16–19																
	15																
	14																
+1 SD	13											X					
	12																X
	11																
Mean	10	X														X	
	9		X								X		X				
	8				X												
−1 SD	7			X		X		X		X					X		
	6													X			
	5								X								
−2 SD	4				X												
	3						X										
	2																
−3 SD	1																
	0																

Confidence Intervals (CI)

	PA	NW Rep	DSF	DSB	VA	LC	FD	SR	DSR	SC	NW Read	RF	NW Spell	WE-Word	RC	WE-Disc	WE-Sent
Lower CI value (-) for __% level																	
Standard Score																	
Upper CI value (+) for __% level																	

Step 1: For each subtest administered, enter the Standard Score from the Scoring Chart (on the front cover) in the white cell at the top of the corresponding subtest column in the Profile Chart.

Step 2: Mark an X over the dot for the corresponding score in the column.

Step 3: Draw a vertical line from the X to the horizontal line representing the mean in the chart (at standard score 10).

Step 4: In the table above, fill in the student's Standard Score for each subtest administered.

Step 5: Decide whether to use the 68% or the 90% confidence interval; write in the one selected. Look up the corresponding CI values for the student's age in the Appendix in the *Examiner's Manual*.

Step 6: Add and subtract these values from each Standard Score, and enter the resulting numbers in the appropriate upper and lower confidence interval value boxes.

Step 7: In the Profile Chart above, draw short horizontal lines through the dots corresponding to the upper and lower CI boundaries.

Upper CI value (+) for 68% level	78	92	71				34
Standard Score	80	95	73				32
Lower CI value (-) for 68% level	82	98	75				30

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Figure 5. TILLS[1] profile based on subtest[2] scores for an 11-year-old, Grade 5 girl who demonstrates a specific comprehension deficit but also earned a Written Expression-Word score reflecting her difficulty spelling real words.

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[2]Key for Subtests: VA = Vocabulary Awareness, PA = Phonemic Awareness, SR = Story Retelling, NWRep = Nonword Repetition, NWSpell = Nonword Spelling, LC = Listening Comprehension, RC = Reading Comprehension, FD = Following Directions, DSR = Delayed Story Retelling, NWRead = Nonword Reading, RF = Reading Fluency, WE-Disc = Written Expression—Discourse Score, WE-Sent = Written Expression—Sentence Score, WE-Word = Written Expression—Word Score, SC = Social Communication, DSF=Digit Span Forward, DSB = Digit Span Backward.

are based on results for an 11-year-old girl who was referred by her Grade 5 teacher for comprehension problems and unusual spelling errors. As shown in Figure 4, this girl's Identification Core score was consistent with a diagnosis of language/literacy disorder. Additionally, the data in the box at the bottom of Figure 5 show a TILLS profile with a Sound/Word composite (standard score = 95) and a Sentence/Discourse composite (standard score = 73) suggesting a specific comprehension deficit. Even though this student's average-to-high scores on the nonword tests showed no indication of difficulties typical of phonological dyslexia, her Written Expression-Word score of 6 indicated difficulty with word structure knowledge and real-word spelling, which also was consistent with her teacher's concerns at referral. The Written Expression-Word score, along with her low score in Vocabulary Awareness, suggested a need for intervention to target her abilities to connect semantics with word-structure aspects of morphology and orthography, perhaps drawing on phonological skills as a strength.

Other evidence of verbal memory problems could come from a profile in which a student earns a higher score on the RC subtest than the LC subtest. In such cases, the examiner might suspect a problem involving auditory verbal memory. Although that pattern is not apparent in Figure 5, this student did exhibit verbal memory challenges in her difficulties on the Following Directions subtest, as well as her borderline score on Story Retelling and even lower score on Delayed Story Retelling. Such problems might be addressed by teaching her strategies for organizing and visualizing the underlying discourse structures and relevant vocabulary as ways to strengthen her memory and retrieval.

Conclusions

In conclusion, developing well designed measures for assessing language comprehension is challenging but important for developing a comprehensive picture of a student's oral and written language skills. Research has shown the importance of measuring multiple dimensions of language comprehension, including vocabulary, grammar, discourse, and associated skills of inferencing, comprehension monitoring, and verbal memory. Examples from the TILLS illustrate how test designers can respond to challenges of test design. When evaluating test

options, examiners should seek evidence that pilot testing and Item Response Theory analysis have been used to improve reliability, reduce cultural bias, and minimize guessing.

It is important to keep in mind that research has shown that "there is no 'magic profile' that captures all children [with comprehension deficits] and totally 'explains' their poor comprehension" (Nation, 2019, p. 64). Clinicians should not expect to find pure subtypes (Bishop & Snowling, 2004), and hence, should not be alarmed if profiles do not fit neatly into one of the quadrants illustrated in Figure 1. Regardless, knowing whether comprehension can be considered a strength to be drawn on as a resource or an area of concern to be targeted in intervention is an essential part of comprehensive assessment. The status of a student's comprehension must not be either assumed or ignored, which is why valid and reliable assessment tools are so critical.

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Book review: The Knowledge Gap: The hidden cause of America's broken education system – and how to fix it

Reviewed by **Lyn Stone**

The Knowledge Gap: The hidden cause of America's broken education system – and how to fix it.
Natalie Wexler,
Avery, 2019.

No one is a stranger to the notion that there is a problem in teaching reading comprehension, least of all education journalist Natalie Wexler. Though Natalie is abundantly familiar with the technicalities of education research and the implications of the data that it yields, her book *The Knowledge Gap* deftly shows, through vivid storytelling, how that data, and its use or misuse, affects real people.

The stories of how influential educators such as Daniel Willingham, Lucy Calkins, E.D Hirsch and Doug Lemov contributed to the current scene are woven through the book.

In a similar weaving fashion, Wexler also inserts, after each chapter, an account of the monthly progress of two third grade teachers with vastly different approaches. She began following them at the beginning of the school year in August 2016. The first teacher used teaching methods that focused on knowledge-building and the other used the popular skills- building approach. Every month, Wexler went in to observe the classes, talk to the children and interview the teacher. In one case, the project only lasted until December of that year, for reasons she will explain. Each account is a fascinating glimpse into a curriculum with and without rich content.

In the March 2017 report, the effect on teacher wellbeing is highlighted, when a trainee teacher takes the class and is observed and corrected at times by the regular teacher:

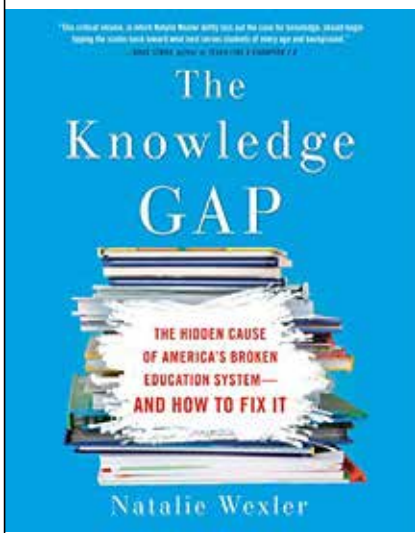
"But those few missteps aside, Ms. Washington was able to conduct a successful lesson despite her inexperience. That's largely because the curriculum provided engaging material for her to work with. Yes, she had to figure out how best to present it – what questions to ask, when to pause for clarification, how to keep the kids interested. But she didn't need to figure out what to teach, as so many inexperienced teachers do."

Divided into three parts, The Knowledge Gap encompasses the present, the past and the possible future if we do or don't heed the warnings within.

In part one, Wexler summarises the current situation, including the fact that there has been much focus on improving reading outcomes, but despite massive efforts and a lot of time money and energy, they have not improved overall. Wexler states that there has been no shortage of attempted explanations for why little progress has been made, and outlines some of the well-meaning but ineffective initiatives in education to address the gaps in outcomes. These include grit, character and growth-mindset training, mental and physical healthcare, restorative justice, and project-based learning.

The Reading Wars, of course, get a mention, with an excellent introduction to Rudolf Flesch and his ground-breaking *Why Johnny Can't Read*. This is an ideal refresher for anyone interested in the history of conflict about teaching reading, and also explains the opposing systems of practice and their origins. Wexler starts with Flesch and then moves on through the works of Jeanne Chall, Frank Smith and the No Child Left Behind program.

Part two takes a longer view of the history of education in general, beginning in rural eighteenth century France with the work of Jean Jacques Rousseau. It's a cautionary tale against the idea of overdoing student 'agency'. Wexler describes the factors contributing to the birth of progressive education, complete with mentions of John Dewey and the influence of Bloom's Taxonomy.



The good news is that Wexler also shows what happens when schools buck those systems and philosophies by mentioning the Michaela School in England, and concludes that even though US schools might not be ready to embrace something as 'traditional' (as opposed to 'progressive') as the Michaela model, Michaela's success still presents a very good argument for addressing knowledge gaps in elementary school.

Part three is the self-explanatory *How We Can Change: Creating and Delivering a Content-Focused Curriculum*. It begins with a chapter on the US Common Core and how that came about. This is a handy summary for those not familiar with the concept of the Common Core. It goes on to tell of schools and districts who changed towards focusing on building knowledge, and how those changes could as easily fall away with changes in leadership.

No analysis of education standards would be complete without a look at the importance of writing, and whose story would be better here than Wexler's own co-author of the acclaimed *Writing Revolution*, Judith Hochman? (Hochman & Wexler, 2017).

> "Hochman discovered that writing, reading comprehension, and analytical ability were all connected – and that writing was the key to unlocking the other two. If you wanted to enable students to understand what they were reading, convert information into long-lasting knowledge, and learn to think critically, teaching them to write was about the best thing you could do." (p. 219)

The question of scaling up the many successes that individual teachers and schools have had when moving to a more knowledge-rich curriculum, is discussed in the final chapter. An increasing number of schools in the United States and in the United Kingdom have started adopting literacy curricula that do focus on content and building knowledge rather than these largely illusory "skills" and the results have been very promising.

Wexler modestly describes her discovery of the knowledge gap as something she "stumbled upon", but her profound understanding of how children learn, and how effective teachers teach, leave no doubt that she was primed to offer analysis and solutions to a problem few have the insight even to notice. Wexler's gift for storytelling, and her thorough treatment of the knowledge gap, make this book a compelling read and a must-have for every educator committed to improving education outcomes for all students.

Reference

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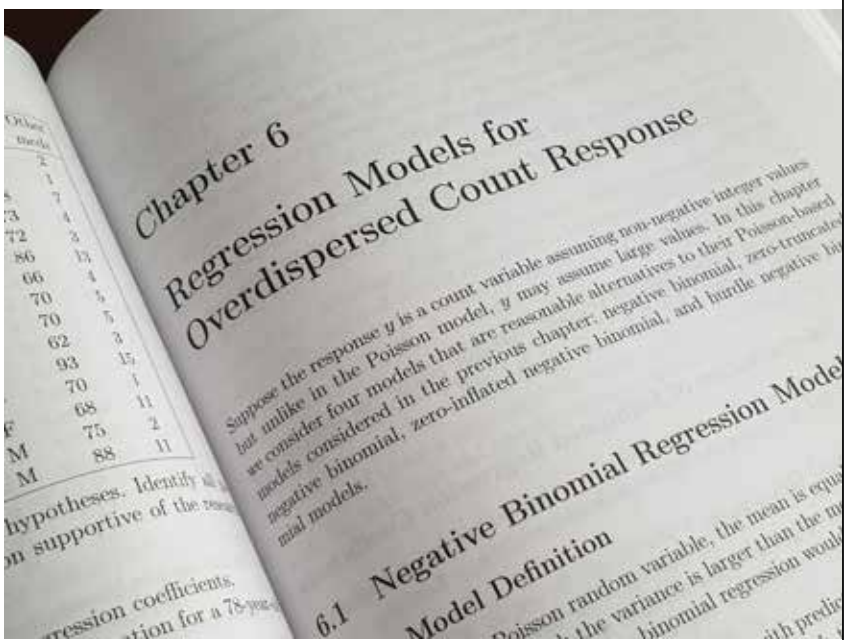
Lyn Stone is the Director of Lifelong Literacy and is deeply interested in supporting students and teachers to awaken their linguistic curiosity and become better readers and writers. She can often be seen teaching online, sometimes wearing pyjamas.



Book review: Robust Comprehension Instructions with Questioning the Author – 15 Years Smarter

Reviewed by **Ros Neilson**

Robust Comprehension Instructions with Questioning the Author – 15 Years Smarter
Isabel L. Beck, Margaret G. McKeown & Cheryl A. Sandora (2021)
The Guilford Press.

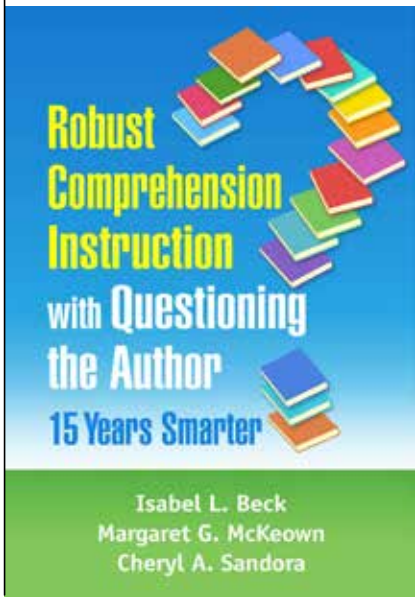
When Beck, McKeown and Kucan introduced the concept of 'robust vocabulary instruction' in *Bringing Words to Life*, first published in 2002, their approach to teaching vocabulary quickly became a standard part of classroom and workshop practice. The concept of 'Questioning the Author' (QtA) as a teaching procedure for comprehension instruction was introduced by the same group of researchers a few years later (Beck & McKeown, 2006), and I think it is safe to say that QtA is relatively less well known. Instead, current mainstream practice for comprehension instruction tends to focus on the use of explicit strategies such as summarising, predicting, generating questions and finding the main idea – an approach first introduced as 'reciprocal teaching' by Brown and colleagues (see Palincsar & Brown, 1984). Recently, too, there has been increasing emphasis on supporting students' background knowledge – see review of Wexler's *The Knowledge Gap*, this issue, and Smith et al., (2021). The second edition of QtA, released in 2021, is subtitled *'15 years smarter'*, and I will be really interested to see how widely it becomes accepted.

QtA is described as a 'content' rather than a 'strategy' approach. The QtA authors acknowledge the importance of background knowledge as a facilitator of comprehension, but they argue that giving students background knowledge does not automatically mean that students understand the text they are reading. The underlying premise of the QtA approach is that it focusses directly on the experience of comprehension, rather than adding another layer of strategy use as students come to grips with meaning. QtA teaching involves teacher-guided, open-ended discussions interspersed with the reading of text, simply aimed at helping students to work out what the author was saying.

The term 'simply' in the above paragraph is, needless to say, deceptive. To implement QtA, the teacher prepares the lesson by first reading the text very carefully, deciding what the essential take-home messages are, and choosing stop points at which to bring the students into the discussion. At the stop points the teacher uses what are referred to as 'queries' rather than 'questions'. Queries are open ended and non-specific – such as "What's going on here?" – leaving students to experience the construction of meaning for themselves, with the teacher's guidance and further probes. This is not a simple thing to orchestrate in the classroom, and implementing QtA requires a good deal of preparation on the part of the teacher before every lesson starts.

The second edition – *'15 years smarter'* – fills gaps that the authors had observed in the first publication. The introductory theoretical chapters set the scene in terms of current reading comprehension teaching practice, and they are followed by general instruction on plans for narrative and expository texts, and detailed examination of the kinds of queries that are suggested. Special topics include after-reading activities and further analyses, vocabulary teaching within QtA, and extending the process into the writing classroom. The book ends with implementation considerations, including accounts of how both teachers and students can, with practice and support, learn to make the most of a QtA approach.

The empirical evidence for QtA (McKeown & Beck, 2009) is a study, replicated over two years, that compared three instruction approaches in 5th grade classes: a 'content' (QtA) approach, a 'strategy' approach (with lessons scripted by experts in



strategy instruction, to minimise any effects related to teacher preference) and a business-as-usual basal reader approach. Teachers were trained in the delivery of each approach, and fidelity of delivery was monitored throughout. The outcome measures included analysis of the quality of classroom discussion about texts as well as other comprehension measures. Differences between the groups at the end of the study were small but significant; it was reported that QtA had superior outcomes than both the strategy and the basal reader approaches on tests of narrative recall and expository learning probes. Students in the QtA condition gave longer and more meaningful responses in classroom discourse, rather than merely repeating words from the text, and teachers responded more fully to students, extending the students' comments to add to their coherence. Exit interview with the teachers yielded mixed opinions, with the strategy approach garnering more positive comments. Strategy teaching tended to feel more natural to teachers, and it was described as "a recipe that never fails them" by one teacher (McKeown & Beck, 2009, p. 241). Teachers who used the QtA approach commented that the stronger students responded particularly well. They also commented that it was difficult to refrain from giving the students more information: "It's hard just to let them think on their own ... I kept wanting to put my two cents in" (p. 241).

Margaret McKeown discusses the 2009 research article in a podcast presented by the "Voice of Literacy": *http://www.voiceofliteracy.org/posts/34422*.

A delightful podcast of an interview with Margaret McKeown has been published by Oliver (Ollie) Lovell (Episode 47 of the Education Reading room, available at https://www.ollielovell.com/podcast/). I recommend it highly for readers who want to think more about QtA. Ollie took the courageous step of preparing a lesson plan that used QtA to analyse an Inuit folk tale, and presented his plan live to Margaret McKeown for comments and feedback. During the course of the podcast, she guided him into changing his approach to questioning, steering him away from focusing on interesting events and new vocabulary items that were not related to the core meaning of the folk tale, and instead working towards introducing vocabulary that served to encapsulate the moral dilemmas raised within the story. It was fascinating to notice how Ollie's teaching habits were being challenged by an approach that is so firmly focused on understanding the meaning that the author intended. The final interpretation of the folk tale that Margaret McKeown and Ollie reached was very satisfying indeed.

QtA is a clearly written, accessible book with a very cogent message, and I think it deserves a wide readership. Implementing QtA, with the intense 'close reading' that it demands of the teacher, and with the free-flowing but orchestrated nature of the classroom discussion, may be difficult for many teachers. Learning to teach QtA well would, I think, involve a good deal of supervised practice. The QtA approach is, however, how I would like to be taught if I were back in the classroom.

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Consultant notes

Olivia Connelly, Convenor, Consultants Committee

With another busy start to the year, it has already been a year of contrasting highs and challenges for all teachers.

The Consultants Committee developed an excellent online professional development seminar, presented on 30 May 2021, entitled 'High impact strategies for secondary students with LD'. Presenters were:

- Renae Watkins (LDA Treasurer and Website Editor), discussing intensive literacy instruction for secondary students;
- Melanie Henry (a new member of the LDA consultant group) discussing shifts practitioners can make to improve oral language in students;
- Ben Saulsman (a Western Australian mathematics consultant), discussing resources and scaffolds for students with numeracy challenges; and
- Dr Sharonne Telfer, discussing school-wide positive behavioural interventions and supports.

Many thanks to all involved with planning, organising and presenting this very successful event.

We recently farewelled long standing LDA Consultant member, Helen Rizzuto, who has made the decision to retire from her work as an LDA Consultant Specialist Teacher. Helen began her career in 1968 in the classroom and undertook further study to pursue her passion for teaching students with special needs, culminating in a Master of Education at the University of Melbourne. Over the years Helen held positions in ESL, learning difficulties, visual impairment, hearing impairment, and intellectual and physical disabilities. From 1998 to 2013 Helen taught LD students at Overnewton College, and as Head of Special Education on her campus she helped to establish the foundations of their Special Education faculty. As a consultant member of LDA, Helen enjoyed the company of her colleagues and hosting network meetings. In her retirement Helen is looking forward to travelling and spending more time with family and friends.

Finally, I would like to introduce and warmly welcome our new Consultant Administration Officer, Bec Rangas. Bec had large shoes to fill in replacing our beloved Elaine McLeish but within a short space of time, she has shown her immense skill in managing renewals, consultant enquiries, supporting the Consultant's Committee with meetings, overseeing the Online Tutor Service, assisting with the development of the website and much, much more. We are so appreciative to have her on our team and look forward to working with her to ensure that LDA remains an excellent organisation for assisting students with learning challenges and the practitioners who support them.

Olivia Connelly
Convenor, Consultants Committee

Olivia Connelly is the Director of Gameplan, a language, literacy and learning practice in Brunswick East, Melbourne. She is passionate about supporting children, adolescents and adults with learning challenges using research-driven practices, and she presents regularly to schools and organisations. Olivia has been the recipient of a city of Yarra grant for four years in a row, to provide language and literacy services to two under-privileged schools in Melbourne. She is also the busy Mum of two very energetic children.

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