This presentation: some touch-points

➢ Language development in the context of early life experience / adversity
➢ Advocacy for the language-literacy nexus and all that this implies
➢ The School-to-Prison Pipeline
➢ Commitment to the scientific method and knowledge translation
➢ Understanding and speaking the language of policy
➢ Difficult conversations and role demarcations
➢ Widening scope of practice?

Where in the world?

The pathway to offending
Male:Female ratio of 5:1 (Higher in custodial settings)
Over-representation of

- Single-parent households – absent fathers
- Dysfunctional communication / parenting
- Parental mental health problems
- Involvement with child protection services
- History of behaviour / conduct disturbance
- Low educational attainment / attainment
- School exclusion
- Developmental disability (diagnosed or not)
- Low SES
- Intergenerational un/under-employment in parents
- Early initiation into substance use / abuse
- Early death

Better advocacy & support for vulnerable young people

Evidence-based practice in early years' education

Oral language competence
Implications for language development?

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The School-to-Prison Pipeline: What is it and why is it relevant to SLP scope of practice?

- Exclusions on behaviour grounds: suspensions and expulsions
- Role of undiagnosed LD in:
  - Socially inappropriate behaviour
  - Poor behavioural self-regulation
- Academic under-achievement, especially as this pertains to reading, writing, and spelling
- Has inputs at a number of developmental stages and via different “service doors”
- Does not refer simply to literal “prisons”.
- There is no more entrenched form of imprisonment than social marginalisation – this is not time-limited
- Role for SLT scope of practice in the School-to-Prison pipeline

ORAL LANGUAGE?

Everyday talking (expressive) and listening (receptive / comprehension) skills, and the mental representations that support both

Language consists of many component skills

Knowledge of the structure of language
- Sound system (phonology);
- Rules of syntax and morphology
Vocabulary (semantics) and concepts
Knowledge about how to communicate in different social situations (pragmatics)

(Bloom & Lahey, 1978)
Language has many layers

❖ Structural
❖ Discourse
❖ Metalinguistic
❖ Pragmatics

All are relevant to the everyday communication success and to transition to literacy and ongoing achievement of competency in reading, writing, and spelling.

Language entails both surface (literal) and deep (non-literal) meanings

❖ Smiles
❖ Metaphor
❖ Idiom
❖ Joke
❖ Sarcasm
❖ Analogy
❖ Irony

Social cognition

❖ Humans are socialised to “play against” their emotions in order to maintain face
❖ Therefore we need to identify and “read” subtle affective cues that may be at odds with verbal cues
❖ Need to read, assess, and respond to cues in real time, and monitor their effects (and effects of our adjustments) on the interaction
❖ Susceptible to developmental stage, maltreatment history, and a range of clinical disorders

Language and the developmental company it keeps: ALL relevant to psychosocial and academic success

☐ Cognition
☐ Emotion processing & naming
☐ Self-regulating
☐ Reasoning
☐ Problem-solving
☐ Predicting
☐ Inferencing
☐ Remembering
☐ Social cognition
☐ Perspective taking
☐ Empathising
☐ Moving from the concrete to the abstract

Language skills and school success

✓ Transition to literacy – reading, writing and spelling
✓ Classroom discourse – expressive & receptive
✓ Friendships and “belonging”
✓ Bullying
✓ Self-efficacy for learning
✓ Mental health problems:
  ✓ Internalising disorders – anxiety and depression
  ✓ Externalising disorders – aggression and poor compliance
✓ Social cognition / inferencing
✓ Narrative skills
✓ Accounting for one’s own behaviour – “forensic” interviewing in schools / restorative practices
Oral language competence as a solid foundation in early life

Language development and early mental health

- Importance of the interpersonal space
- Development of secure attachment
- Reciprocity and responsiveness
- "Motherese" / Child-directed language
- Being child-led
- Emotional warmth and attunement
- Development of empathy & perspective taking
- Linking of emotion words to emotional self regulation
- Language and social cognition

Adverse Childhood Experiences (ACEs)

- Neglect (various forms)
- Maltreatment (various forms)
- Trauma Exposure
- Major loss (e.g. of key attachment figure)

Cumulative and linked to

- Risky health behaviours,
- Chronic health conditions (physical and mental),
- Compromised life potential, and
- Early death.

Who misses out on all of these developmental benefits?
### Adolescence: A risk & protective factor framework

#### Risk Factors
- Poor academic achievement
- Coercive / erratic parenting
- Sensation-seeking personality
- History of conduct disturbance
- Lack of connectedness
- Substance-abusing peers

#### Protective Factors
- Academic success
- Positive parental support
- Strong self-esteem
- Resilience
- Strong sense of connectedness
- Non substance-abusing peers

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### Language exposure and SES - Hart & Risley (1995)

- **Language exposure and SES**:
  
- **30 million word advantage by age 4**

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### Language exposure and SES - Hart & Risley (1995)

- **Important qualitative differences in parental input**

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### Adolescence: A risk & protective factor framework: Where is oral language competence?

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### Language exposure and SES - Hart & Risley (1995)

- **30 million word advantage by age 4**

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### Language exposure and SES - Hart & Risley (1995)

- **Important qualitative differences in parental input**
Remembering that…

➢ Not all low SES families provide linguistically undernourishing environments
➢ Not all high SES families provide linguistically enriched environments
➢ Language skills are related to human and social capital, not just economic capital – cf Daniel Willingham
➢ This research does not resolve the nature-nurture question
➢ Plenty of supporting evidence re SES gradient and language outcomes (beyond Hart & Risley’s work)

And also…. Being from a low-SES background does not preclude or trump the presence of a Developmental Language Disorder (or any other kinds of neurodevelopmental disorder)

We need more research to parse these factors out.

Language is a paradox

❖ Humans have evolved a special facility for oral language, such that it is innate (“biologically primary”). BUT
➢ It is highly vulnerable to a range of developmental conditions, e.g. hearing impairment, intellectual disability, autism spectrum disorders, brain injury, FASD;
➢ It is highly sensitive to environmental exposure.

SES-based language differences in pre/early-school years mean that interventions need to accelerate, not just promote early language skills if children are to succeed academically

(Roy & Chiat, 2013)

A task for you…..listen carefully to the instructions

Reading and writing float on a sea of talk.
James Britton
Children with language disorders... 

.....grow into adolescents with language disorders....

...who grow into adults with language disorders.

What’s the role of oral language skills in beginning reading and school success?

Oral language skills promote

✓ Vocabulary
✓ Word knowledge (as well as word knowledge)
✓ Narrative language skills (and skills in other discourse genres)
✓ Phonological awareness
  ✓ Phonemic awareness
  ✓ Rhyme
  ✓ Alliteration
  ✓ Syllable awareness
✓ Appreciation of levels and layers of meaning (literal, figurative, humour, irony, sarcasm, etc)

BUT – on their own, oral language skills do not get children across the bridge to literacy
Oral language competence as a solid foundation in early life

Oral Language Competence

- Transition to literacy
- Development of Prosocial Skills
- Academic achievement
- Social engagement
- Marketable employment skills / Transition to further education or training

Instructional environment
- Text exposure
- Language exposure
- Scaffolding from parents & teachers
- Positive role models
- Social capital

Expressive & Receptive

Both continue to develop throughout childhood & adolescence

Australian data on language disorders and literacy difficulties

- Language disorders affect approximately 17% of 4 year olds (Reilly et al., 2010)
- One in five Year 9 students in Australia has a learning difficulty, and a significant proportion of such students have other co-existing persistent communication impairments (McLeod & McKinnon, 2007).
- Approximately 1 in 2 young offenders performs in a clinical range on standardised language measures (Snow & Powell 2005; 2008; 2011)
- 40,000 15 year-olds (1 in 7) fail to meet OECD basic reading standards (ACER, 2016)

Literacy and the big picture

- Literacy, employment and the economy
- Literacy and health
- Literacy and crime
- Literacy and health literacy
- Literacy as a (modifiable) social determinant of health and well-being
Industry Skills Council of Australia, 2011

“Literally millions of Australians have insufficient language, literacy and numeracy skills to benefit fully from training or to participate effectively at work”


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Language skills and reading

- Reading is a very recent development in evolutionary terms (about 6000 years).
- It is a biologically secondary skill
- Learning to read is fundamentally a linguistic task
- Reading must re-purpose existing language neural pathways
- Children with “just enough” oral language skills can fly under the adult radar

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The transition to literacy....

- Is not biologically “natural” – it is biologically secondary and requires specific and prolonged instruction;
- Builds directly on psycholinguistic competencies acquired before school entry, e.g.
  - Vocabulary
  - Narrative skills
  - Syntax
  - Phonological/phonemic/morphologic awareness
- Promotes
  - academic achievement,
  - school attachment and retention,
  - positive self esteem
- An important protective factor

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“Literacy is parasitic on language”

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Language skills and reading difficulties:

A bi-directional relationship

Many children with early oral language difficulties go on to display reading difficulties (decoding and/or comprehension) and many children identified for the first time because of reading difficulties, actually have unidentified language disorders

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Language and literacy: a two-way street

Oral language abilities

Reading abilities
The “Matthew Effect” in learning to read

![Graph showing the Matthew Effect in reading]

The importance of robust early literacy instruction from the outset

“...children’s level of reading achievement is determined early in their school experience... By third grade, the level of reading ability that children have attained is likely to remain relatively stable; it is difficult to escape a pattern of failure that has lasted through a large part of elementary school”

(Greenfield Spira et al., 2005 p. 233).

National Inquiries into the teaching of reading

❖ USA: National Reading Panel – 2000
❖ Australia: National Inquiry into the Teaching of Literacy (Rowe) - 2005

Consistently emphasised importance of phonemic awareness and phonics as starting point, together with high-level teacher knowledge, but selective quote-mining in some quarters has morphed the recommendations to mean “Balanced Literacy”

Rose Report (2006) some key recommendations:

➢ ...the renewed Primary National Strategy Framework for teaching literacy should provide, as a priority, clear guidance on developing children’s speaking and listening skills.
➢ High quality, systematic phonic work as defined by the review should be taught discretely. The knowledge, skills and understanding that constitute high quality phonic work should be taught as the prime approach in learning to decode (to read) and encode (to write/spell) print.
➢ Phonic work should be set within a broad and rich language curriculum that takes full account of developing the four interdependent strands of language: speaking, listening, reading and writing and enlarging children’s stock of words.

Australian National Inquiry into the Teaching of Literacy (2005)

Recommendation 1
The Committee recommends that teachers be equipped with teaching strategies based on findings from rigorous, evidence-based research that are shown to be effective in enhancing the literacy development of all children.

Recommendation 2
The Committee recommends that teachers provide systematic, direct and explicit phonics instruction so that children master the essential alphabetic code-breaking skills required for foundational reading proficiency. Equally, that teachers provide an integrated approach to reading that supports the development of oral language, vocabulary, grammar, reading fluency, comprehension and the literacies of new technologies.
Expressed another way….

“It is better to teach the code system of written English systematically and explicitly than it is to teach it randomly, indirectly, or incidentally”.

Moats (2010, p.17)

Reading science: Mixed messages and knowledge translation challenges

- Reading, writing, and spelling (and numeracy) are 21st century skills – for education, vocational training; life chances, quality of life. Employers know this.
- Cognitive psychology research tells us that ~3-5% of children should struggle with reading, writing, and spelling – yet in reality “30% do so.
- We suffer more from a research translation failure than we do from a lack of research on what constitutes effective instruction.
- Ideology has trumped rigorous evidence for too long in education – together with a willingness to adopt populist fads with no research to back them.
- Children who start from behind are the greatest casualties of these phenomena.

Literacy: Five (or seven) Big Ideas

✓ Phonemic Awareness
✓ Phonics
✓ Vocabulary
✓ Comprehension
✓ Fluency
✓ (Oracy)
✓ (Morphology)

The big ideas are inter-dependent

THE SIMPLE VIEW OF READING (Gough & Tunmer, 1986)

Word recognition: Decoding
Oral language comprehension
Reading comprehension: Accuracy, speed, understanding

Useful for classifying sub-types of reading difficulty
Applies to students at any age or learning stage
CLASSIFYING READING DIFFICULTY SUB-TYPES USING THE SVR

About 25% of poor readers will have a specific comprehension deficit.

About 75% of poor readers will have a word reading deficit or a mixed reading deficit profile.

About 15 to 25% of poor readers will have a specific comprehension deficit.

See Catts et al., 2003

Rich pre-school oral language exposure, including being read to by adults is important because

➢ It promotes development of the language system, receptively and expressively: vocab, syntactic complexity, phonological/phonemic awareness, narrative language skill
➢ It promotes print-concepts
➢ It promotes world knowledge > later “domain” knowledge – essential for academic success
➢ It (hopefully) instils a “love of reading”

BUT

➢ The SVR tells us that strong oral language skills do not turn good talkers into good readers – there is an additional skill that needs to be taught.

ALL children need to learn to decode. Some need to be taught to do so very explicitly

1. English is a morpho-phonemic language
2. Decoding is a necessary but not sufficient skill-set for all children – same applies to language skills

The big ideas are inter-dependent
Which one of these is contentious?

Contentious AND poorly understood

— Snow & Juel (2005)

"There’s more to reading than decoding"

Explicit teaching of alphabetic decoding skills is helpful for all children, harmful for none, and crucial for some.

Snow & Juel (2005)
Phonics ain’t phonics

<table>
<thead>
<tr>
<th>Synthetic Phonics</th>
<th>Analytic Phonics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does NOT mean “plastic” or “fake”: Synthetic comes from “synthesising”</td>
<td></td>
</tr>
<tr>
<td>Teaching is explicit, starting with a small number of sound-letter correspondences</td>
<td>Teaching is incidental (“in context”)</td>
</tr>
<tr>
<td>Focus on blending, segmenting, inserting &amp; deleting</td>
<td>Focus on similarities in word families; onset and rime</td>
</tr>
<tr>
<td>Encourages decoding through the word</td>
<td>Focus is on the initial sound / digraph; then revert to use of other strategies</td>
</tr>
<tr>
<td>Part-to-whole analysis</td>
<td>Whole-to-part analysis</td>
</tr>
</tbody>
</table>

Other forms of phonics instruction: Incidental and Embedded

“Balanced Literacy”: Read the fine print

Heavy reliance on Three Cueing Strategy

Strongly reminiscent of Whole Language

**Analytic Vs Synthetic Phonics**

Semantic and syntactic knowledge are critical, but SSP teaching has an explicit (and initial) rather than an incidental focus on phonics.

**NOT consistent with recommendations of three National Reading Inquiries**

Eclectic Vs systematic

“Eclectic” is at odds with “systematic”

Is it enough for phonics to be “in the mix”?

Why multi-cueing (search-lights) should be discouraged

It teaches the habits of poor readers

“Skilled readers rarely try to recognize words by guessing their identities on the basis of the context because decoding is a far more accurate and efficient approach. Research has shown that there is only a slim chance of guessing a word correctly from the contextual cues alone”.

(Snow, Scarborough & Burns, 1999, p. 51)
Balanced Literacy:
❖ Is a well-intentioned and/or strategic re-working of Whole Language-based early reading instruction
❖ Was not a recommendation of any of the three national inquiries into the teaching of literacy
❖ Does not have an agreed upon definition
❖ Is open to wide interpretation by individual teachers
❖ Is explicitly eclectic rather than systematic
❖ Is not predicated on strong teacher knowledge about language
❖ Does not advocate the use of systematic synthetic phonics
❖ Is widely promoted by teacher education academics
❖ Has not resulted in improvements in children’s literacy levels

The “Matthew Effect” in learning to read

Teacher knowledge of language constructs
Fielding-Barnsley (2010)
Tetley & Jones (2014)
Moats (2014)
Stark et al. (2015)
❖ But note – some findings indicate suboptimal knowledge of SLPs too…… (Spencer et al. 2008, LSHSS)

Advice to Foundation (Reception) parents, Term 1, 2017
Help your child become a ‘good reader’.
- Get children to place the book on a table or on their laps.
- Children should use two hands – one to steady the book and one to point to the words.
- Finger pointing is important for early readers.
- It’s okay to read the story to your child first, then give them a turn. (Some will need this to start with, some won’t.)
- Good readers guess what’s going to happen, and pick up any patterns in a book.
- Good readers use the pictures to help work out the words.
- Give plenty of praise and be proud – kids pick up the voice you’re sending out.
- Good readers can use the first letter of a word to give them a clue. (When they are ready.)

Use Decoding Strategies
Look at the Pictures.
Look at the picture before reading to get an idea of what the story is about. When stuck on a word, look at the picture to help predict what the word might be.
How much does application of science matter in other fields?

Education’s relationship with evidence

“Unfortunately, lack of rigor and respect for evidence in reading education are reinforced by the passivity of education leaders who feel that any idea that can muster a vigorous advocate is legitimate and deserves to be aired”.

Dr Louisa Moats (2000, p.12)

Some ideas* in education that can muster an advocate

Learning Styles
Left brain – right brain learners
“We only use 10% of our brain” – and anything with “Brain-Based” in the title
Multiple intelligences
Brain Gym
Coloured / Irlen Lenses
CogMed
Arrowsmith Program / and anything that refers to “re-wiring the brain”
Sensory-motor programs (of various descriptions)
Reading Recovery
Nomans Notes: https://www.nomanis.com.au/nomanis-notes

Confused messages re: reading instruction

Would you like “Neuro” with your educational theory?

Evidence..... And Levels of Evidence.
Peer Review and peer review.
Evidence... And Levels of Evidence. Peer Review and peer review.

Hierarchy of Evidence for Treatment Effectiveness

- Systematic reviews
- Meta-Analyses
- RCTs
- Cohort studies
- Case-Control
- Cross-sectional studies
- Case series, Case reports
- Ideas, opinions, editorials, anecdotal

"I just know"

"You can find published evidence to support anything."

We need to #StandUpForScience and science literacy

Evidence-based practice in early years’ education

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- Role for SLT scope of practice in the School-to-Prison pipeline

Language Disorders make it hard to

- Establish and maintain friendships
- Tell a story (e.g., provide evidence; speak up for oneself)
- Consider listener perspective (i.e., judge what the listener needs to know / already knows / may not already know)
- Use specific vocabulary (instead of “you know”, “thing”) 
- Understand idiomatic / figurative language, even at a simple level
- Get a joke / discern good humour from intended offence
- Keep up with social banter
- Be an assertive communicator who can share the load, e.g., can
- Correct a mis-understanding on part of the other speaker
- Avoid and / or repair inadvertent offence
- Reflect on one’s own communicative competence
- Benefit from verbally mediated interventions
- Succeed academically
Young people’s passage through the justice system. 
Implications of LD for:
➢ Early intervention for “high-risk boys”, esp where 
behaviour disturbance + learning difficulties are present
➢ Forensic / School Interviewing / Understanding the court 
process e.g. bail conditions; school discipline decisions / 
contracts
➢ Restorative Justice conferencing
➢ Interventions for young offenders
   — Counselling, Anger Management Programs
   — Literacy Programs for marginalised young people
   — Social skills interventions

Language problems are invisible

Language problems may masquerade as
❖ Rudeness
❖ Indifference / lack of concern
❖ Poor motivation to cooperate
❖ “Yep, nup, dunno, maybe”...and 
other minimalist responses
❖ Suggestibility / Over-compliance 
in forensic interviews, whether 
as suspects, witnesses or victims
❖ Behaviour disturbance
❖ Low IQ
❖ Lack of genuineness / 
authenticity

Language skills and behaviour disturbance
• Behaviour is a form of communication
• Oppositional behaviour is a serious mental 
health problem
• Behavioural self-regulation and language 
problems commonly co-occur
• Comorbid learning difficulties + behaviour 
problems = red flag for (developmental) 
language disorder

We need to understand and speak the language 
of public health policy makers
• Population Vs clinical samples
• Efficacy Vs Effectiveness
• Cost-benefit analysis / cost-effectiveness
• Role and limitations of screening
• Sensitivity Vs Specificity
• Role of different study designs and research 
paradigms
• Evidence-based early reading instruction
Difficult conversations and role demarcations

Response to Intervention

Multi-Tiered Systems of Support (MTSS)

Fences at the top of the cliff, or ambulances at the bottom?

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- The School-to-Prison Pipeline
- Commitment to the scientific method and knowledge translation
- Understanding and speaking the language of policy
- Difficult conversations and role demarcations
- Widening scope of practice?