

AIM Institute for Learning & Research

Language Is Literacy: Why Oral Language Drives Reading and Writing Success

With Dr. Pamela Snow
Moderated by Kristen Wynn





The Road to AIM's 2027 Research to Practice Symposium.

EXPLORE THE IMPACT OF LANGUAGE ON READING AND WRITING

Our History

2012



2006



2026



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EXPLORE THE IMPACT OF LANGUAGE ON READING AND WRITING

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Language Is Literacy: Why Oral Language Drives Reading and Writing Success

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Nancy Hennessy & Julia Salamone

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EXPLORE THE IMPACT OF LANGUAGE ON READING AND WRITING

Exit
01

Language Is Literacy: Why Oral Language Drives Reading and Writing Success

Exit
02



Dr. Pamela Snow
Professor of Cognitive Psychology,
School of Education,
La Trobe University

**March 8,
2027**

2027 AIM RESEARCH TO PRACTICE SYMPOSIUM
The Impact of Language on Reading and Writing

Language Is Literacy: Why Oral Language Drives Reading and Writing Success

Distinguished Professor Pamela Snow

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SOLAR LAB
Science of Language
and Reading Lab



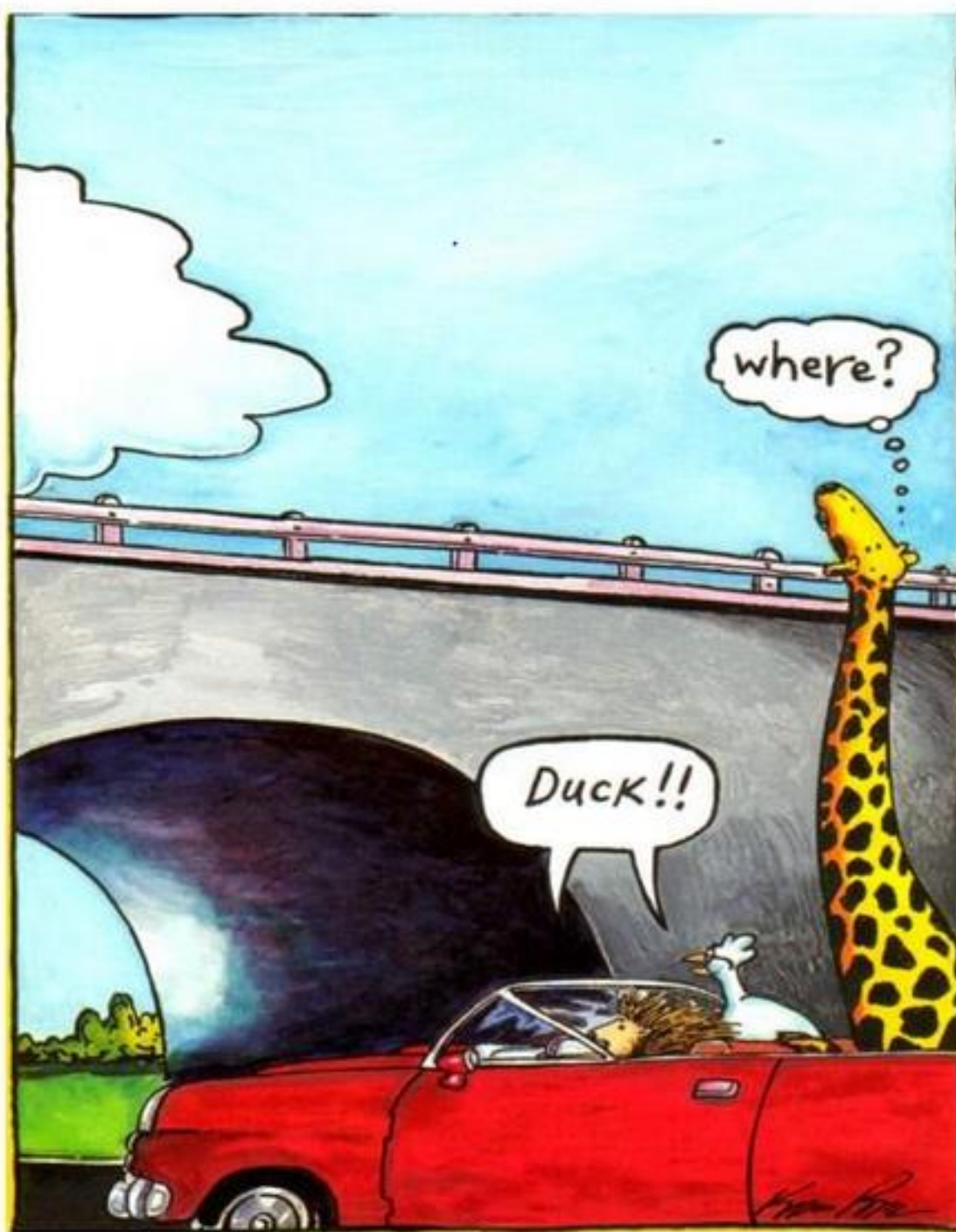
AIM Webinar, October 6-7 2026

Presentation Overview



- *My central thesis: a category error has occurred*
 - The Big Five and the Big Six – where did they come from?
 - Human communication
 - Human language
 - Oral language
- Oral language and reading/writing: **similar and different, but part of one overarching (language) system**
- **Holding and resolving apparent contradictions**
- **The language – literacy nexus must be understood and not fractured for instructional purposes**

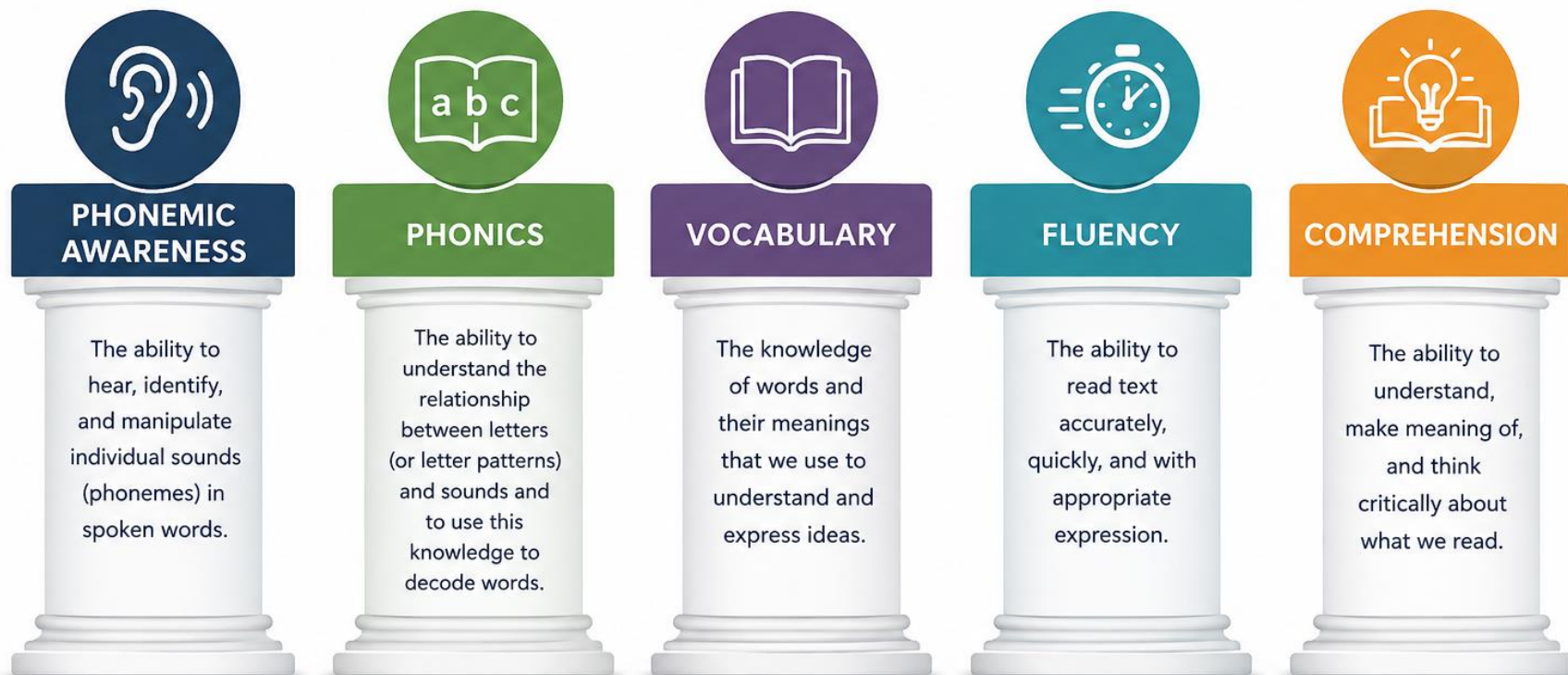




The Big 5

PILLARS OF READING INSTRUCTION

Based on the National Reading Panel Report (US, 2000)



These five pillars work together. Effective reading instruction integrates all five to help every student become a confident and capable reader.



Simple View of Reading (Gough & Tunmer, 1986)

Reading Comprehension =



Decoding / Word Identification x



Oral Language Comprehension

Gough, P. & Tunmer, W. (1986). Decoding, reading, and reading disability. *Remedial and Special Education*, 7, 6–10.



Simple View of Reading (Gough & Tunmer, 1986)

Reading Comprehension =

 Decoding / Word Identification **x**
 Oral Language Comprehension

This was not intended to mean that decoding is not part of the oral language system

Gough, P. & Tunmer, W. (1986). Decoding, reading, and reading disability. *Remedial and Special Education*, 7, 6–10.



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2014

Teaching Reading: Why the “Fab Five” should be the “Big Six”

Deslea Konza

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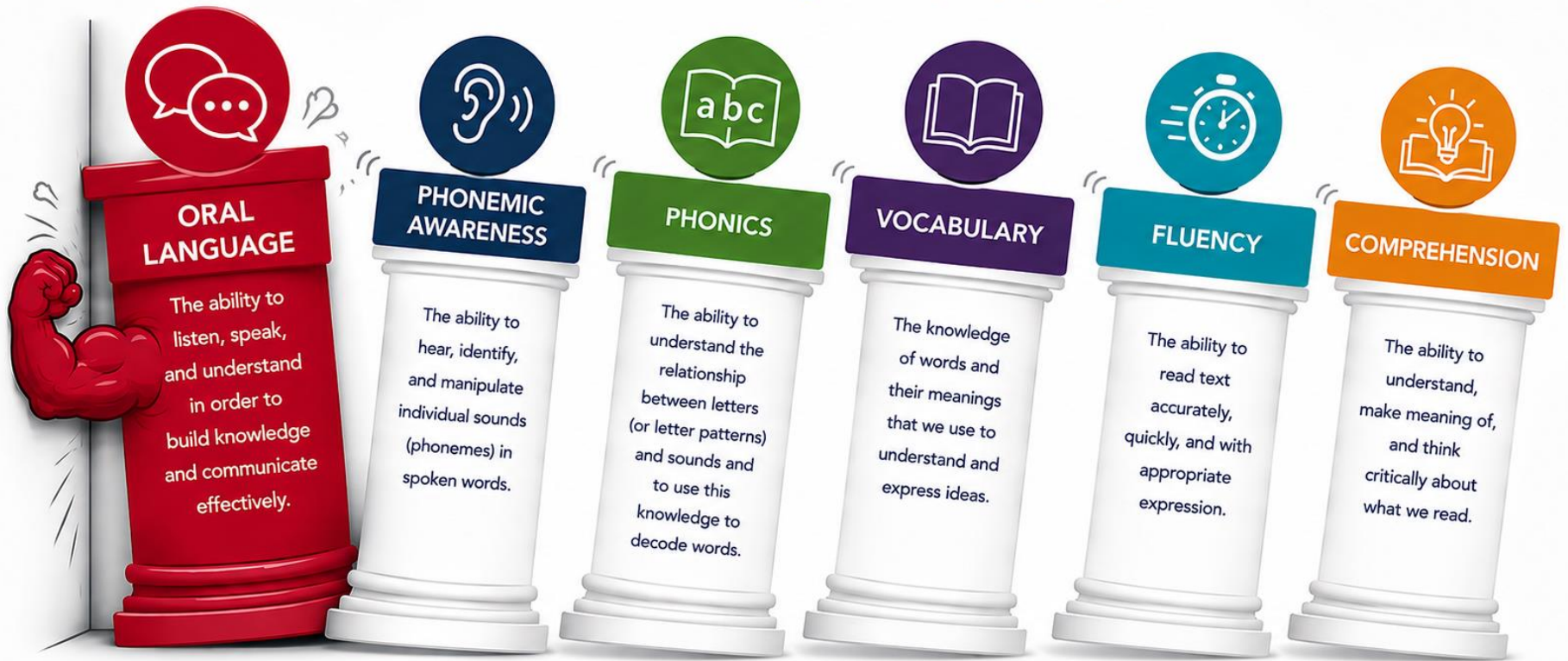
Abstract: The Report of the National Reading Panel (NICHD, 2000) identified five key elements that were critical to the development of reading, and these have been widely accepted by educational jurisdictions as providing definitive guidelines for early reading instruction. This paper presents a case for the inclusion of oral language and early literacy experiences as an additional and foundational element. The pervasive influence of a child's early experiences on future reading achievement must be understood if teachers are to maximise the opportunities of all children to become independent readers.



The Big 6?

PILLARS OF READING INSTRUCTION

Based on the National Reading Panel Report (US, 2000)



Category Error

Adding a category to a list that already includes items that are members of that category.

CATEGORY ERROR

Adding “vegetables” to the shopping list when the individual vegetables are already included.

MINESTRONE SOUP

- ☐ Carrots
- ☐ Tomatoes
- ☐ Onions
- ☐ Celery
- ☐ Vegetables Unnecessary
↔ - it's already
included!



“Vegetables” is a **category**.

Carrots, tomatoes, onions, and celery are **members** of that category.



Avoid category errors: Don’t add the umbrella—list what’s actually inside it.



The Big Five

PILLARS OF READING INSTRUCTION

Based on the National Reading Panel Report (US, 2000)



ORAL LANGUAGE

The foundation for all reading.

Strong oral language skills support and connect each of the Big Five.



PHONEMIC AWARENESS

The ability to hear, identify, and manipulate individual sounds (phonemes) in spoken words.



PHONICS

The ability to understand the relationship between letters (or letter patterns) and sounds and to use this knowledge to decode words.



VOCABULARY

The knowledge of words and their meanings that we use to understand and express ideas.



FLUENCY

The ability to read text accurately, quickly, and with appropriate expression.



COMPREHENSION

The ability to understand, make meaning of, and think critically about what we read.

All five pillars are grounded in oral language.

When we strengthen children's ability to listen, speak, and understand, we build the foundation for reading success.





**Spoken (oral)
communication:**
receptive and
expressive



**Written
communication:**
reading and
writing



**Gesture and
sign language:**
sending and
receiving
messages without
reliance on
spoken or written
words

Human language

Image source: **The Snow Report** <https://pamelasnow.blogspot.com/2026/01/why-big-six-should-actually-be-big-five.html>



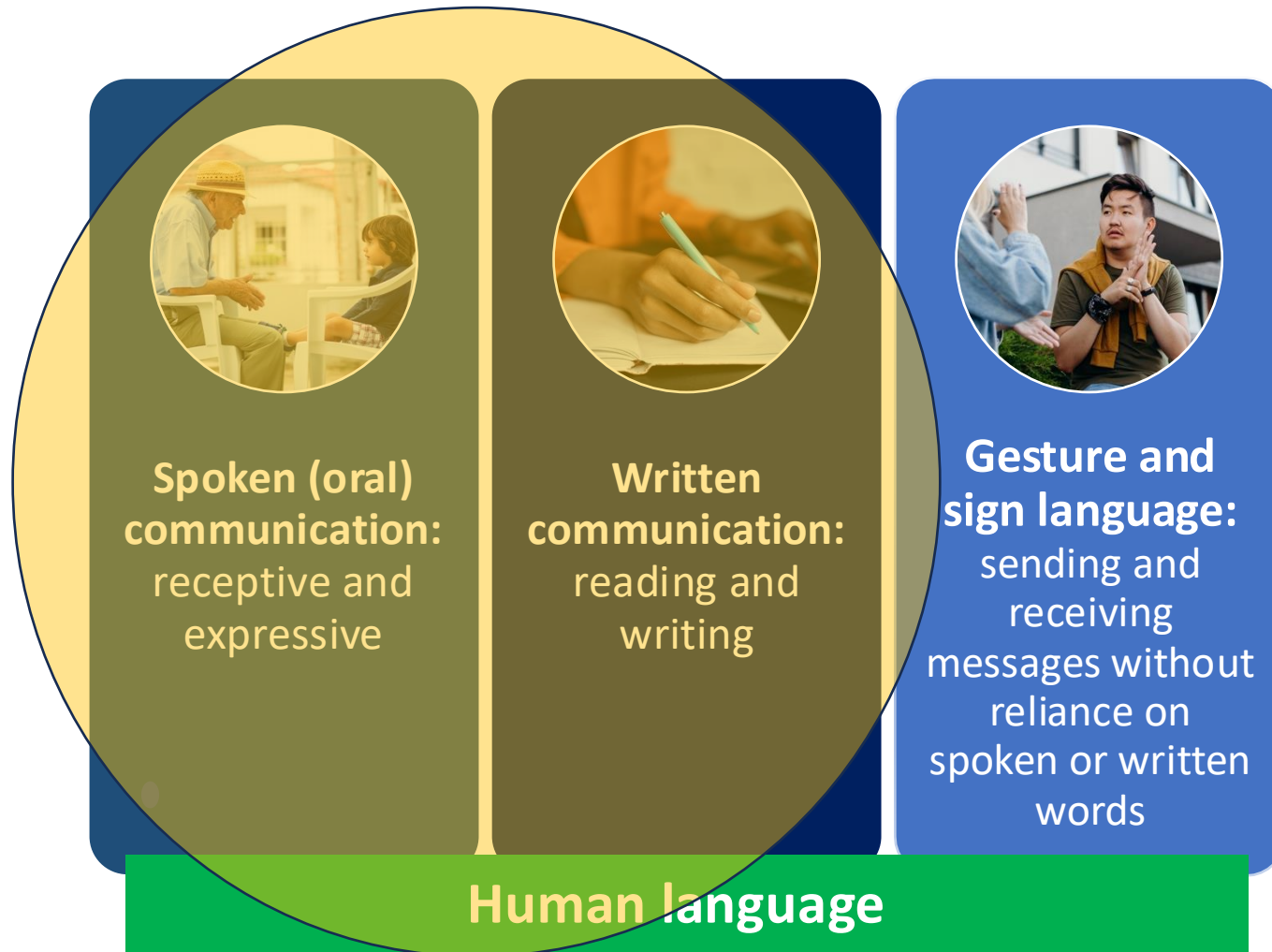


Image source: Snow Report <https://pamelasnow.blogspot.com/2026/01/why-big-six-should-actually-be-big-five.html>



Language

➤ Uses **symbols** to represent meaning

- Spoken words
- Written words
- Pictographs
- Gesture
- Sign language



Image source: <https://koala.sh/images>

➤ Allows us to generate an **infinite number** and range of utterances

➤ Is **rule governed** (e.g., regarding word order; how to form plurals). These rules are implicit for native speakers and need to be consciously learned by second-language learners

➤ Allows humans to describe phenomena that are not physically present: it is **conceptual**



Oral language

- Is generative
- Is rule-governed
- Allows us to discuss and describe abstract ideas – it is conceptual and releases us from being “stimulus bound”
- Is related to cognition, perception, learning, memory
- Has an evolutionary / historical advantage over written language (phylogeny)
- Has a developmental advantage over written language (ontogeny)
- Is “biologically primary”
- Is developmentally vulnerable
- Is an integral (necessary but not sufficient) part of the process of learning to read



Oral language Vs reading

“The language systems of the brain are insistent task masters and rarely give up. Yet, despite the fact that spoken language is a universal human trait, **the route to fluent adult discourse is a messy business**”

McGuinness (2005, p. 155).

“...language *develops*; **it runs on a biological clock**, no matter how complicated this clock turns out to be.

Reading on the other hand, definitely does not “develop”. It **isn't remotely biological or natural**. Although some children might be at the bottom of the reading curve because of a biological clock, **this is likely to be a language clock, not a reading clock**”.

McGuinness (2005, p. 225).

McGuinness, D. (2005). *Language development and learning to read: the scientific study of how language development affects reading skill*. The MIT Press.



Some skills come more naturally to humans than others

Biologically primary skills
– we have an evolutionary advantage



Biologically secondary skills –
we need to be taught



See David Didau: Education isn't natural – that's why it's hard
(Concerning the work of David Geary)

<https://learningspy.co.uk/psychology/can-learn-evolutionary-psychology/>



Oral language has a head-start on reading, writing and spelling

Phylogenetically

(in terms of evolution)



It is biologically primary

BUT – not “set and forget”

Ontogenetically

(in terms of individual development)



See David Didau: Education isn't natural – that's why it's hard
(Concerning the work of David Geary)

<https://learningspy.co.uk/psychology/can-learn-evolutionary-psychology/>





Image source: MS PPT

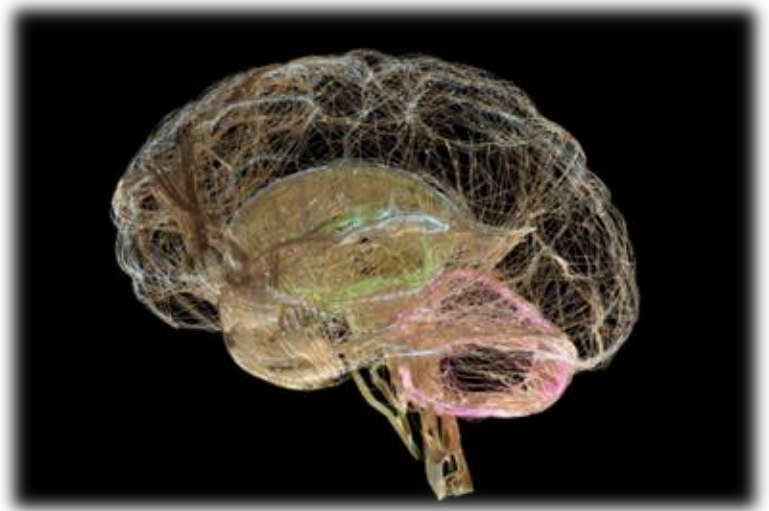


Image source: MS PPT





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**Teaching reading =
loading new software
onto old hardware**

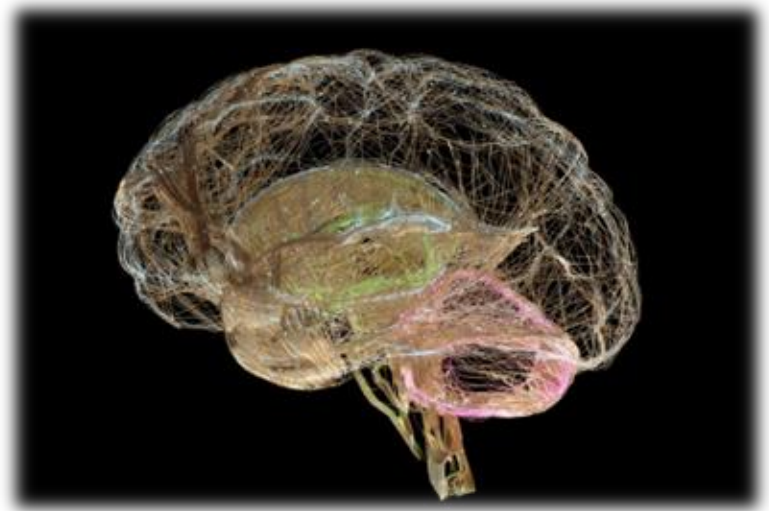


Image source: MS PPT



Oral language?

Everyday talking (expressive) and listening (receptive / comprehension) skills and the mental representations that sit behind them



Image source: <https://koala.sh/images>



Mental representations?

- ☐ Thoughts
- ☐ Ideas
- ☐ Memories
- ☐ Opinions
- ☐ Beliefs
- ☐ Wishes
- ☐ Needs
- ☐ Instructions
- ☐ Etc...



Regardless of modality, language can be used to....

- | | | |
|------------------------------------|-------------------------------------|---------------------------------------|
| ☐ Tell | ☐ Agree | ☐ Suggest |
| ☐ Ask | ☐ Disagree | ☐ Inquire |
| ☐ Inform | ☐ Sympathise | ☐ Persuade |
| ☐ Instruct | ☐ Advise | ☐ Cajole |
| ☐ Narrate | ☐ Clarify | ☐ Imply |
| ☐ Request | ☐ Comment | ☐ Admonish |
| ☐ Influence | ☐ Apologise | ☐ Concur |
| ☐ Argue | ☐ Suggest | ☐ Complain |
| ☐ Praise | ☐ Imply | ☐ Refute |
| ☐ Criticise | ☐ Counsel | ☐ Question |
| ☐ Object | ☐ Direct | ☐ Amuse |
| ☐ Confer | ☐ Entertain | ☐ ...and so on |



Language has many layers

- Structural / Literal
- Figurative / Non-literal
- Discourse
- Metalinguistic
- Pragmatics

There are similarities and differences with respect to how these layers “work” in spoken Vs written language.

Meaning signals come from a range of sources



Image source: <https://koala.sh/images>



Language is a paradox

- Humans have evolved a special facility for oral language, such that it is innate (biologically primary). We have a “language instinct”.

BUT

- It is highly vulnerable to a range of **developmental conditions (forms of neurodiversity)**, e.g., intellectual disability, autism, brain injury; developmental language disorder (DLD); also hearing impairment
- It is highly sensitive to environmental exposure (home language and literacy environment).



Factors that compromise language development also impact reading and writing skills

- ❑ Sensory impairment, esp. hearing impairment / deafness.
- ❑ Neurodiversity: ASD; ID (syndromal and other); ADHD; (D)LD* - noting that comorbidity (co-occurrence) is the norm.
- ❑ Acquired brain injury and other neurological conditions.
- ❑ Suboptimal scaffolding and support from adults in the preschool years
- ❑ Exposure to adverse childhood experiences (ACEs)



Image source: MS PPT

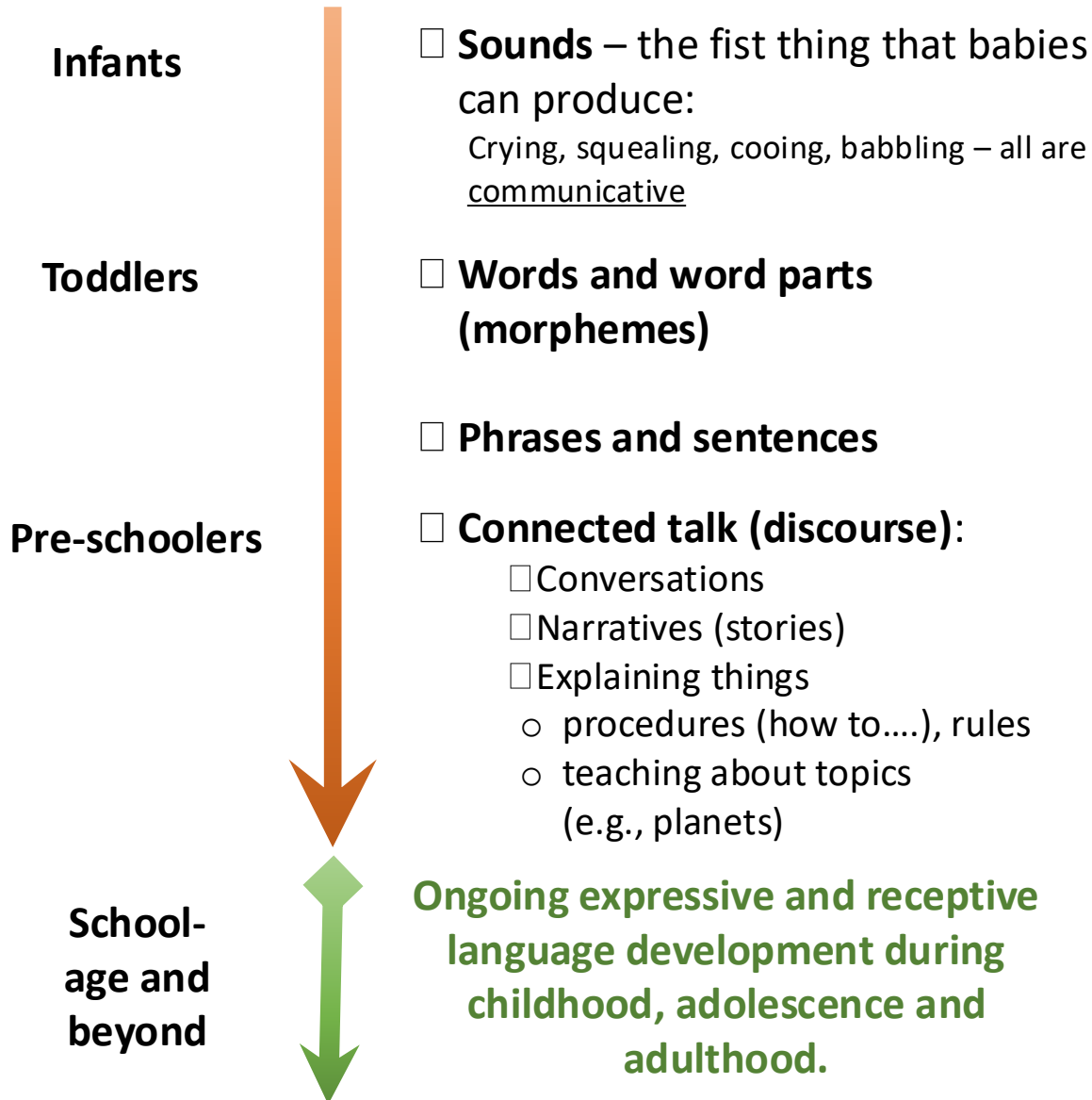


The social gradient impacts children's pre-school language exposure and early literacy experiences.

- There is a social gradient that impacts children's early oral language experiences. BUT -
- Not all low SES families provide linguistically under-nourishing environments
- Not all high SES families provide linguistically enriched environments
- Language skills are related to human and social capital, not just economic capital
- **Schools can respond to this gradient via high-quality explicit teaching**



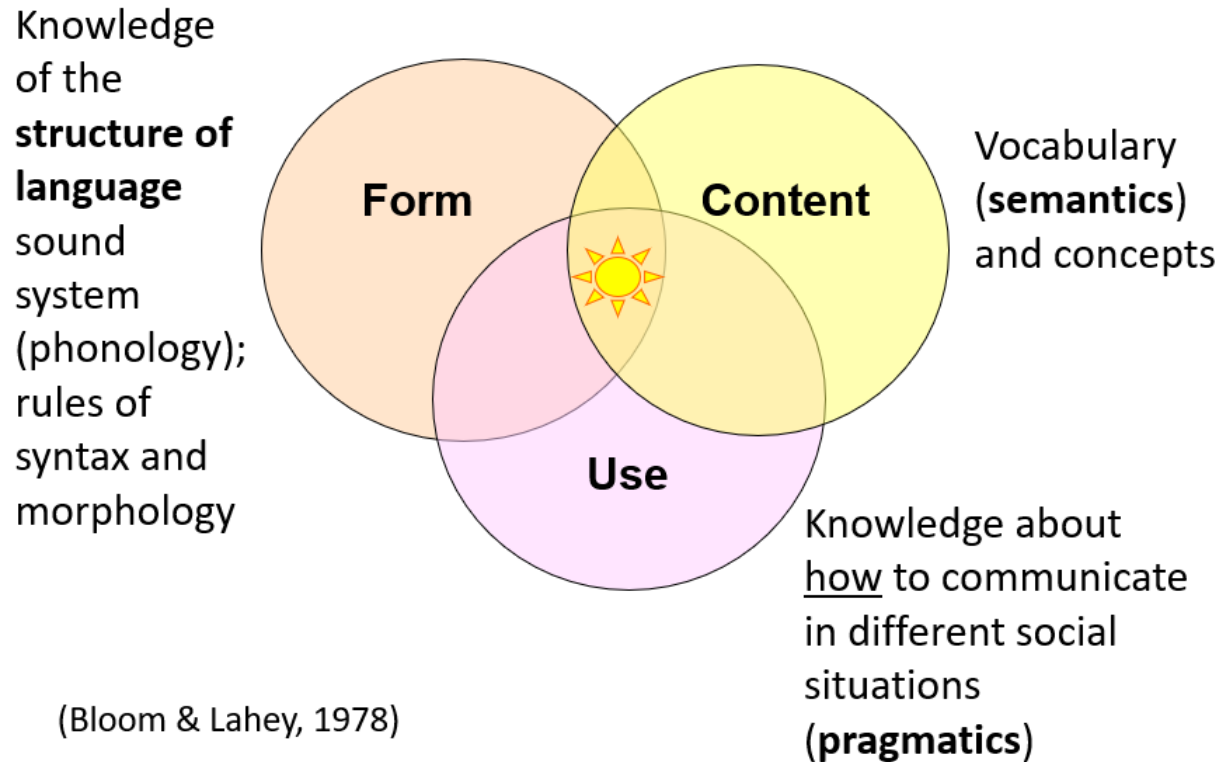
Language development snapshot



Source: P. Snow personal



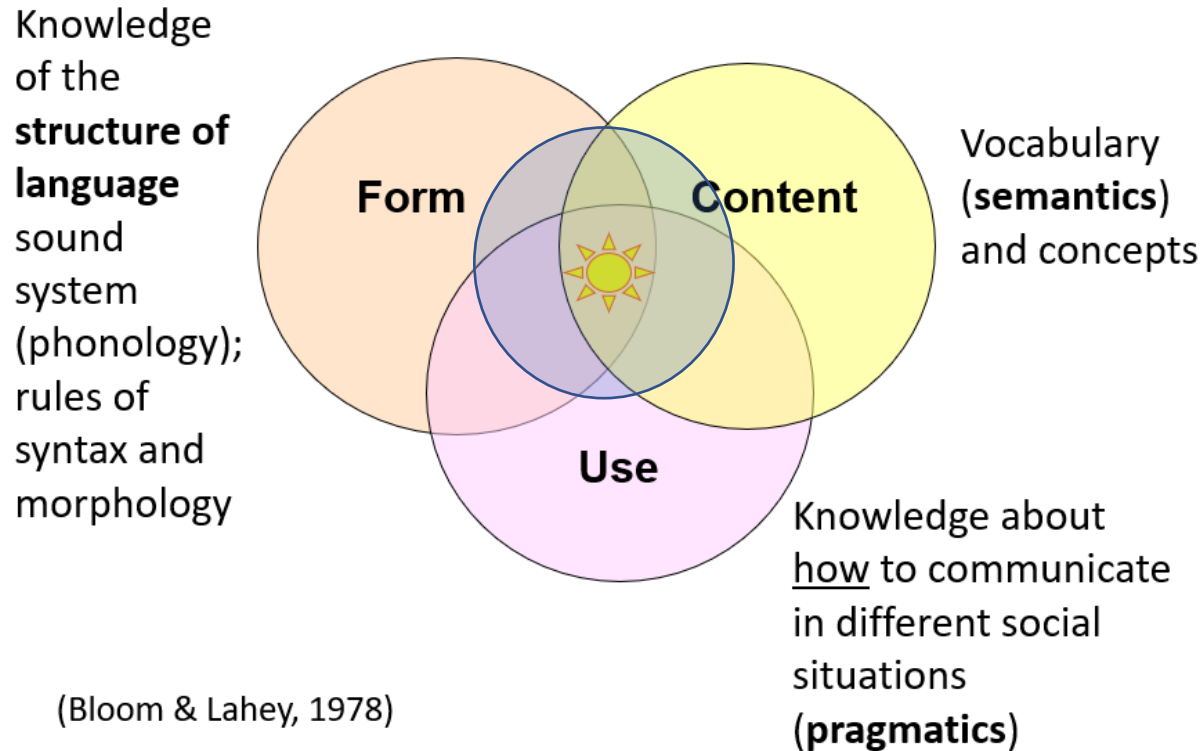
The structure of oral language



Bloom, L. & Lahey, M. (1978). *Language development and language disorders*. Wiley.



The structure of oral language

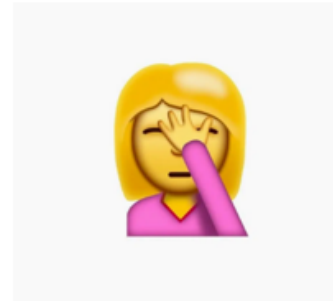


Bloom, L. & Lahey, M. (1978). *Language development and language disorders*. Wiley.



Literal (surface) Vs Implied (deep) meanings

- ▶ *Similes*
- ▶ *Metaphor*
- ▶ *Idiom*
- ▶ *Jokes*
- ▶ *Sarcasm*
- ▶ *Analogy*
- ▶ *Irony*
- ▶ *Satire*
- ▶ *Parody*
- ▶ *Politeness conventions*



Surface and deep meanings: 1



“No, really, I’m thrilled
you’re going away on
another golfing
weekend with your
mates”



Surface and deep meanings: 2



“Maybe my watch is wrong. I thought we were meeting at 9am?”



Surface and deep meanings: 3



“Hi Mum. Just wondering if you’re going to need your car for the next few days?”



Inferencing in everyday conversation is linguistic work that is supported by

- ☐ real-time context
- ☐ facial expressions
- ☐ tone of voice
- ☐ knowledge of social conventions
- ☐ opportunities to clarify
- ☐ shared background knowledge
- ☐ co-construction of spoken interactions



Image source: MS
PowerPoint

BUT – who does all the work in reading?



Inferencing in reading lacks these real-time cues, while still drawing on the oral language system

Jane was annoyed. How many times did she need to remind her adolescent children about the importance of locking the house before going out? She knew one of the first questions the police would ask would be whether she was insured. Now *that* was going to be a fun conversation with Brad – if he would even answer her call.

**What hypotheses have you formed
about information not directly stated?**



Some possible inferences: to be noted and tested by a skilled reader, as part of a “situation model”

- Jane has been burgled
- She has teenage children who sometimes don't lock the house properly when they go out
- She has been addressed this with them previously
- Her insurance is possibly not up to date
- Her husband/partner is probably someone called Brad
- Jane and Brad may not be on very good terms at the moment

Reader **background knowledge** is important here – not background knowledge about someone called Jane, but **about the world and how things work in it.**

See: Smith, R.J., Snow, P.C. & Serry, T.A. & Hammond, L. (2021). The role of background knowledge in reading comprehension: A critical review. *Reading Psychology*, 42(3), 214-240. <https://www.tandfonline.com/doi/full/10.1080/02702711.2021.1888348> (open access)



Language development keeps company with:

- ✓ Thinking
- ✓ Feeling
- ✓ Emotional self-regulation
- ✓ Reasoning
- ✓ Problem-solving
- ✓ Predicting
- ✓ Remembering
- ✓ Perspective taking
- ✓ Moving from the concrete to the abstract
- ✓ Social cognition



Image source: MS
PowerPoint



Social cognition



- ❖ Humans are socialised to **“play against” their emotions** in order to maintain face.
- ❖ Therefore, we need to
 - identify and “read” subtle emotional signals that may be **at odds with verbal signals**
 - read, assess, and respond to signals **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**



SPOKEN VS WRITTEN LANGUAGE



Oral language Vs written language: Same, same but different

Oral language

- Often interactive (co-constructed)
- Contains pauses, hesitations, dysfluencies; false starts
- Constrained by social conventions (pragmatic rules)
- Degree of formality varies
- Punctuation implied by prosodic contour
- No spaces between word boundaries – we “hallucinate” these (Burridge, 2002)

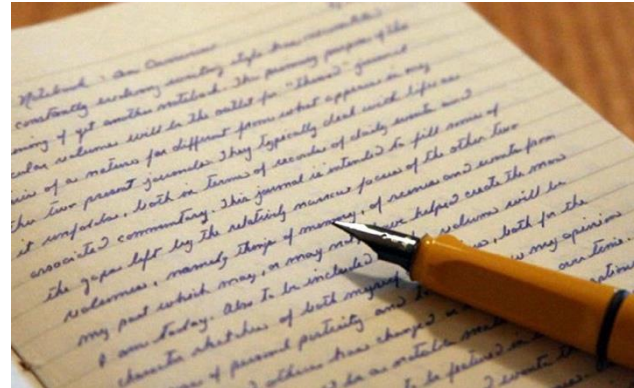


Image source: MS PPT



Written language

- Typically - more formal but this varies according to genre
- Contains spaces to show word boundaries
- Pauses, hesitations, dysfluencies, false starts removed (unless in quotes)
- Syntactic complexity may be greater than spoken language
- Contains punctuation to aid with understanding
- Spelling and grammar can change meaning



A word about English orthography*



- What does the word “orthography” mean?
- English has a history of being a bower bird.
 - Wars, trade, politics, and religion have all resulted in the appropriation of words from other languages.
- When early scribes first started writing language down, there was little uniformity in how they chose to represent sound (phonemes) using letters (graphemes).
- Today, English has a semi-transparent orthography.
- It is rule and pattern-governed, not “random”.
- **Spelling** is not “the problem”; rather, **shifts in pronunciation** over time create challenges for readers.
- Knowledge of etymology helps to de-mystify orthographic conventions.



Morphology: the perfect blurring of oral and written language in English

- English is a “morpho-phonemic” language
- The way that morphemes manifest in spoken Vs written language can differ b/c of phonetic environment
 - English has pairs in which the *same -ed spelling* has different phonological realisations depending on the word's morphological/lexical status

Consider for example:

- Mopped /mɒpt/
- Walked /wɔ:kt/
- Learned /lɜ:nɪd/ Vs learned /lɜ:nd/
- Blessed /blest/ Vs blessed /blesɪd/
- Dogged /dɒɡɪd/ Vs dogged /dɒɡd/



How does knowledge of etymology and morphology support spelling and vocab instruction?

- Knowing the meaning of common bases (ject, sect, tract, struct, cide) etc)
- Knowing the meanings of common prefixes, e.g.

re- = **again**

in-, im-, il-, ir- = **not**

ex-, e- = **out of**

con-, com, co, col = **with**

sub- = **below**

pre- = **before**

post- = **after**

mis- = **badly, wrongly**

mal- = **bad**

de- = **to reverse, remove or separate**

inter- = **between**

intra- = **within**

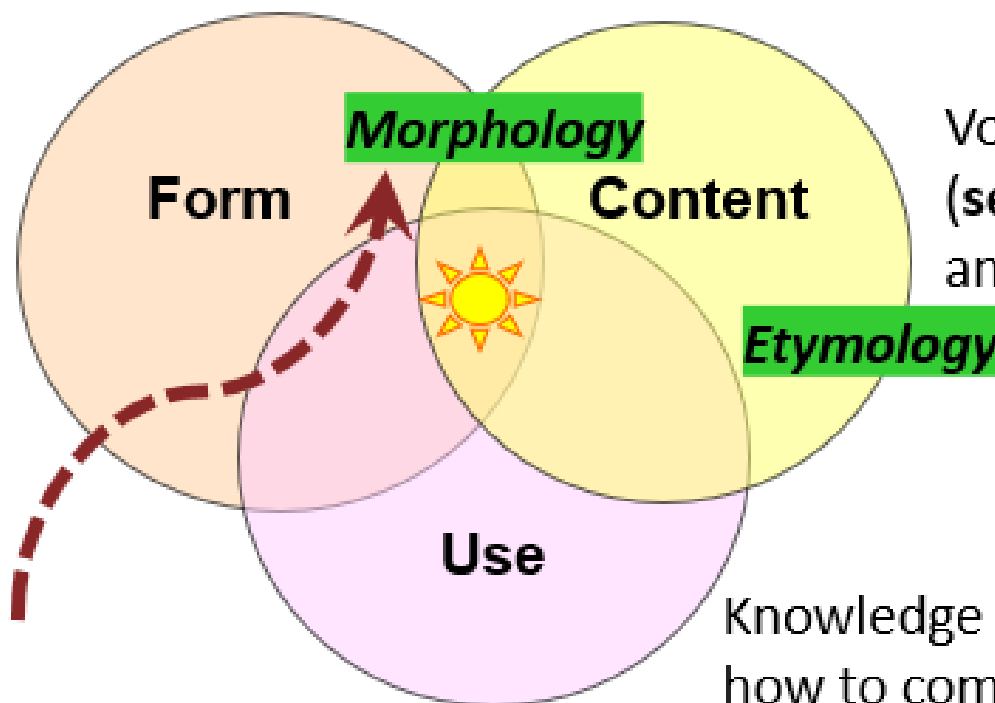
supra- = **above**

- Knowing that some suffixes have **implications for both spelling and pronunciation**, e.g., mop > mopped /mɒpt/



Language consists of many component skills

Knowledge
of the
**structure of
language**
sound
system
(phonology);
rules of
syntax and
morphology



Vocabulary
(**semantics**)
and concepts

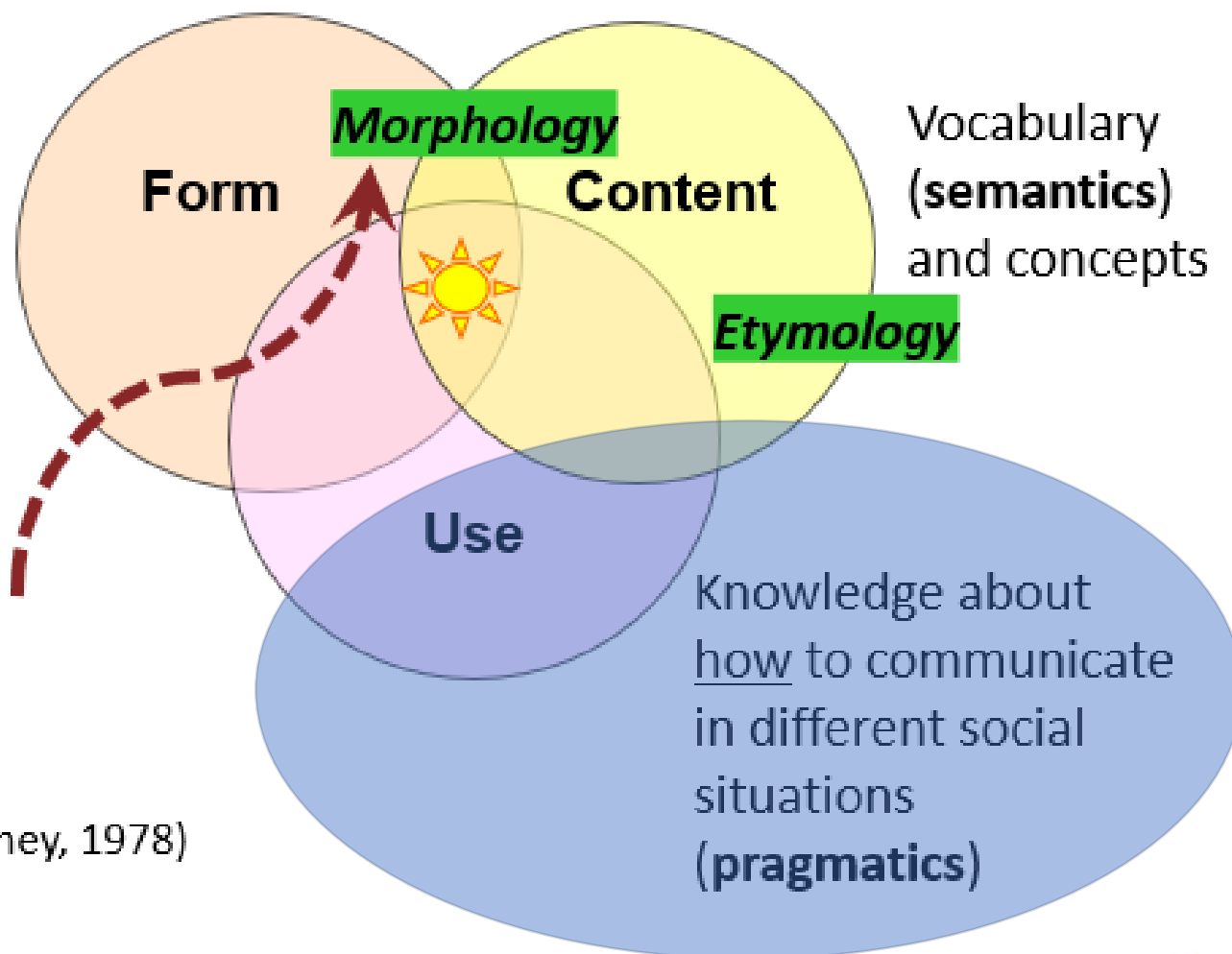
Knowledge about
how to communicate
in different social
situations
(**pragmatics**)

(Bloom & Lahey, 1978)



Language consists of many component skills

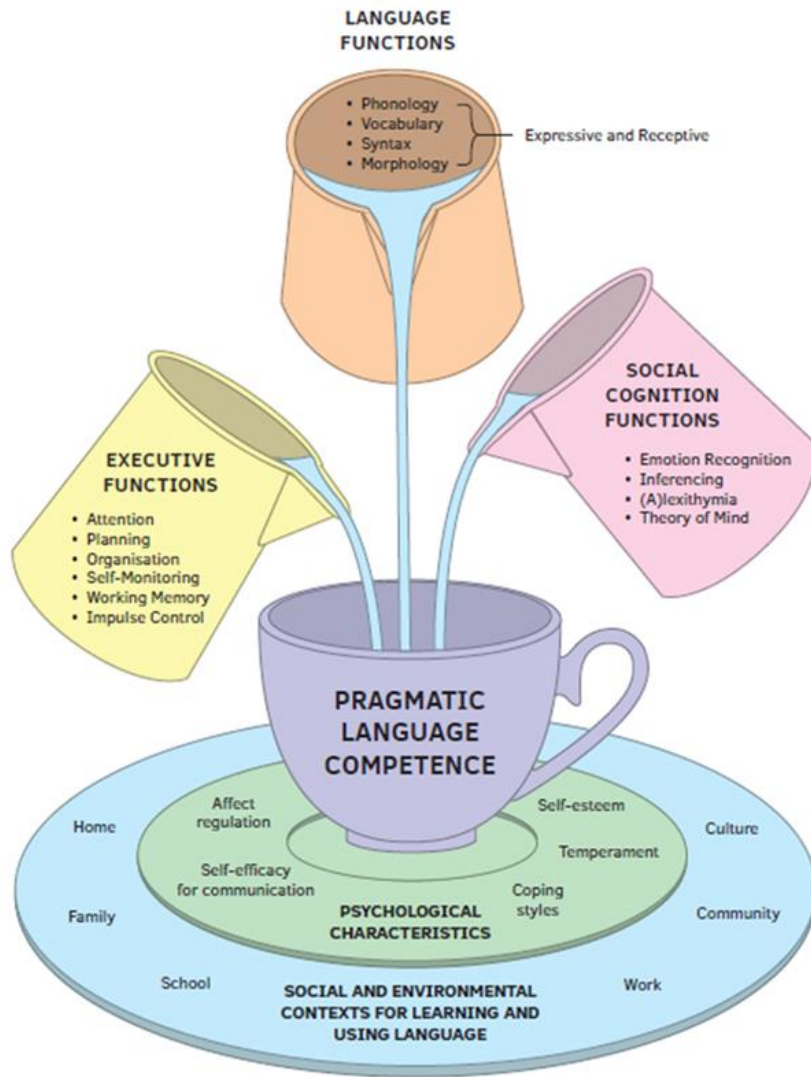
Knowledge
of the
**structure of
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(phonology);
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(Bloom & Lahey, 1978)



Where does pragmatic language competence come from?

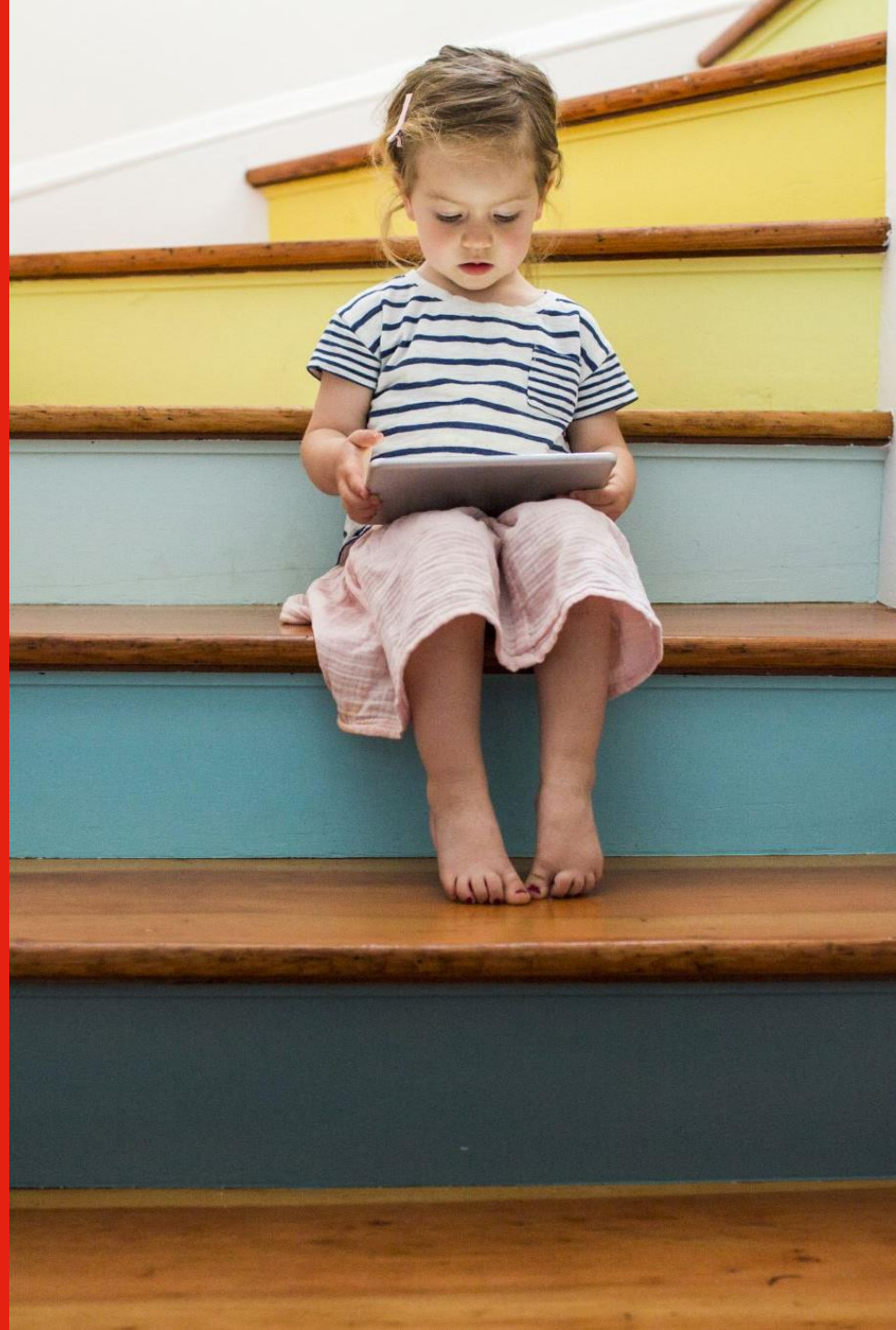


Pragmatic language competence is critical for knowing how to **imply** (send) and **infer** (receive) – as speakers/listeners and as readers/writers

Snow, P.C. & Douglas, J. (2017). Psychosocial aspects of pragmatic language difficulties. In L. Cummings (ed.), *Research in Clinical Pragmatics, Series: Perspectives in Pragmatics, Philosophy & Psychology*, Vol. 11 (pp. 617-649), Springer-Verlag.



Oral language and the transition to literacy



Reading is difficult because

- We do not have a “reading instinct” in the same way that we have a “language instinct”
- Reading is a “biologically secondary” function
- As a language-based skill, it is vulnerable to anything that threatens the integrity of a child’s language competence in the language of instruction
 - Common forms of neurodiversity +/- Language Disorder
 - Developmental Language Disorder
 - The home language and literacy environment
 - Maltreatment/trauma exposure
 - In the case of English-speaking countries, coming from an EALD home background

.....cont.



Reading is difficult because (cont.)

- Writing systems vary with respect to degree of **correspondence between written and spoken text**
- Success is reliant on the **quality of instruction** students receive
- There is **high variability** within and between school districts and sectors with respect to the quality of the instruction on offer
- **Adults often give up** on struggling readers.
Fewer than 20% catch up if they are behind in Year 3.



The language ↔ literacy nexus must not be broken in reading and writing instruction

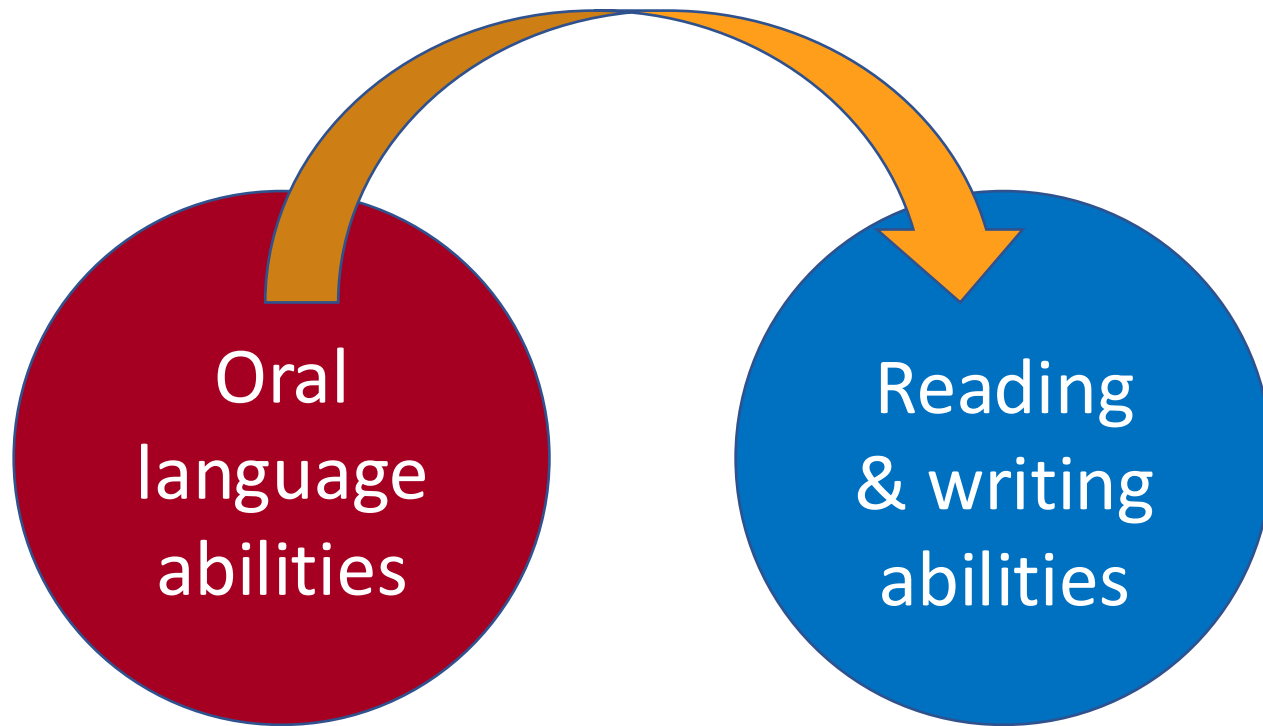
- In English, writing is an imperfect code for spoken language. It was developed over hundreds of years by learned scholars. Children have ~ 3 yrs to master it.
- Oral language skills are acquired naturally (biologically primary); reading needs to be taught (biologically secondary).
- On their own, oral language skills do not turn a good talker into a good reader.
- Strong oral language experiences support but do not replace reading instruction.
- Successful readers add to their spoken vocabularies by acquiring new words through their own reading.
- **Everything about reading is language-based**

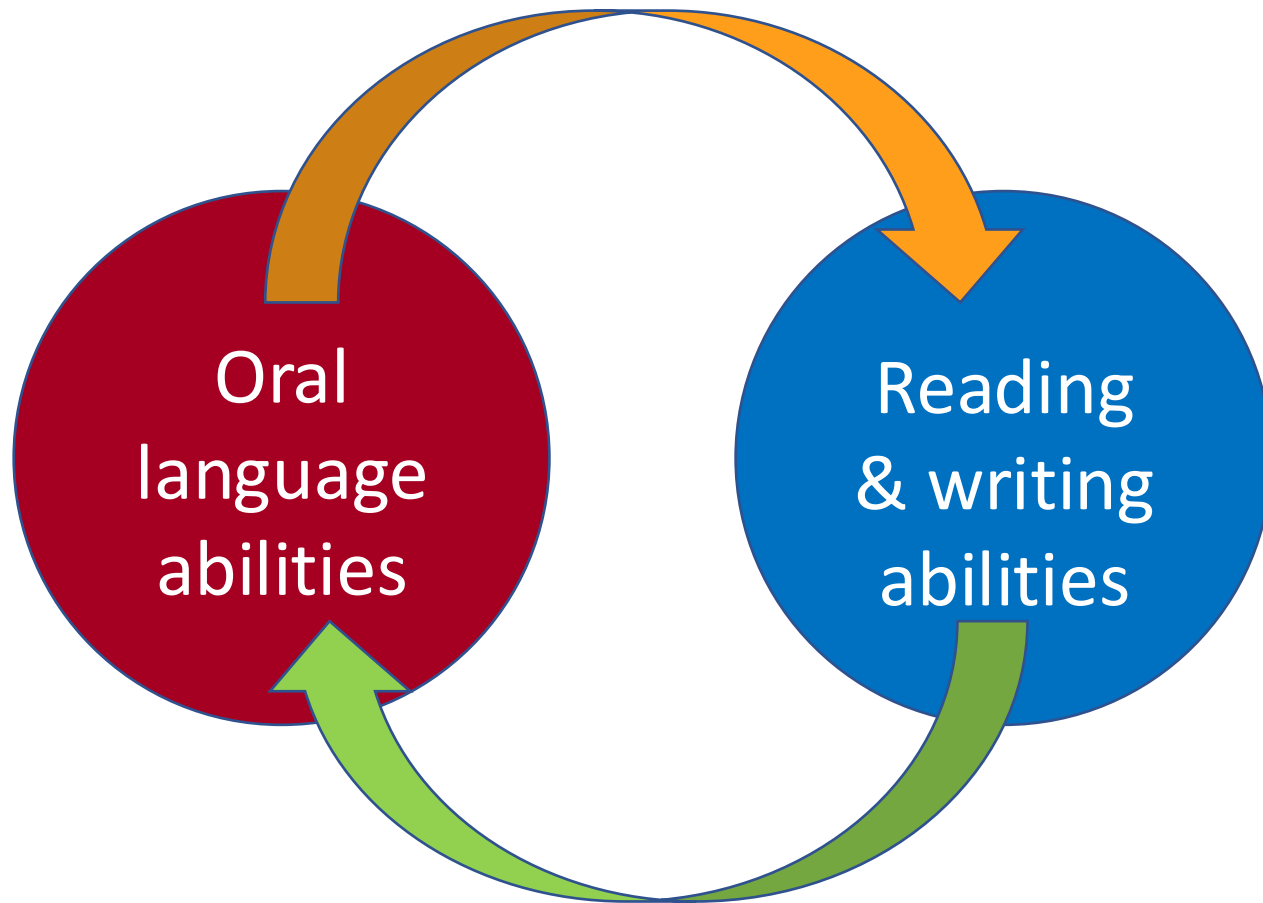


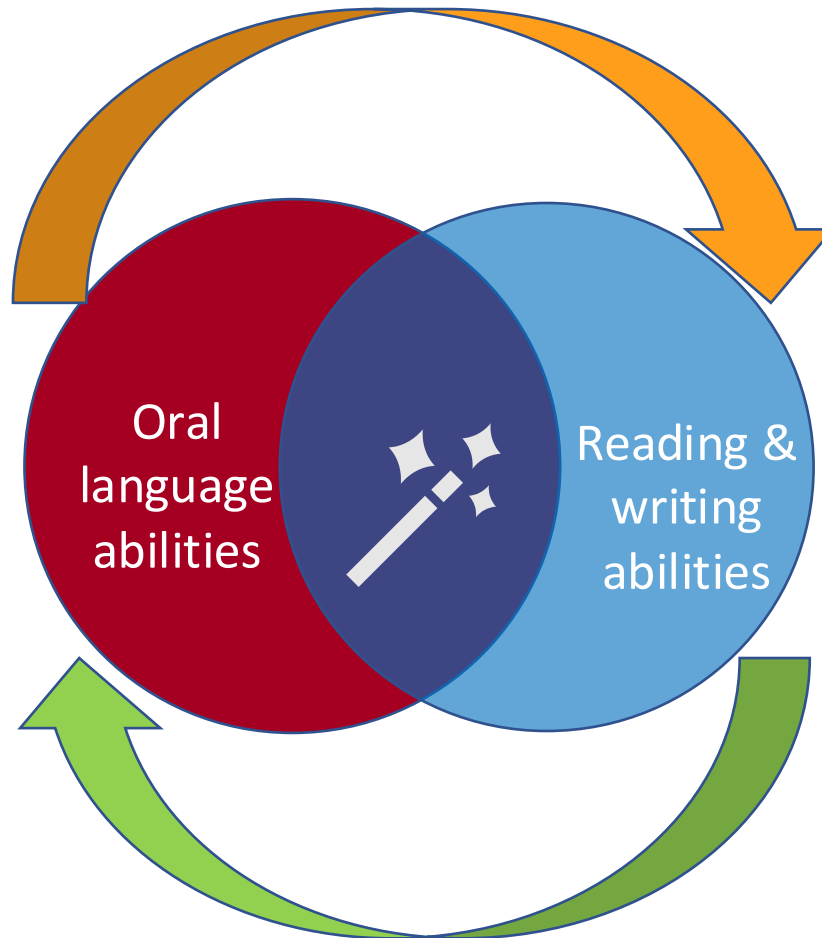


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<https://koala.sh/images>





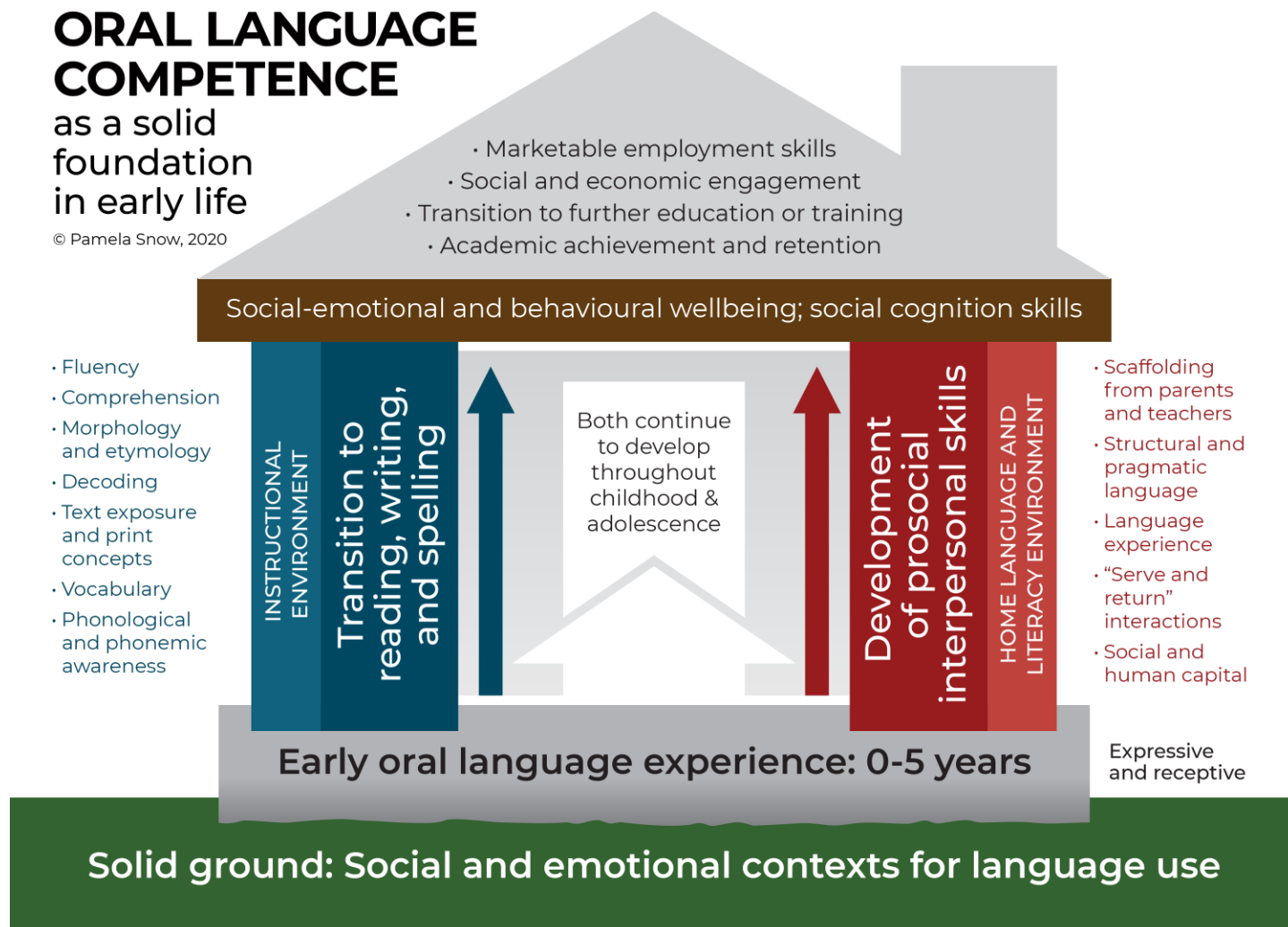




ORAL LANGUAGE COMPETENCE

as a solid
foundation
in early life

© Pamela Snow, 2020



Snow, P.C. (2020). SOLAR: The Science of Language and Reading. *Child Language Teaching and Therapy*, 37(3), 222–233. <https://doi.org/10.1177/0265659020947817>.

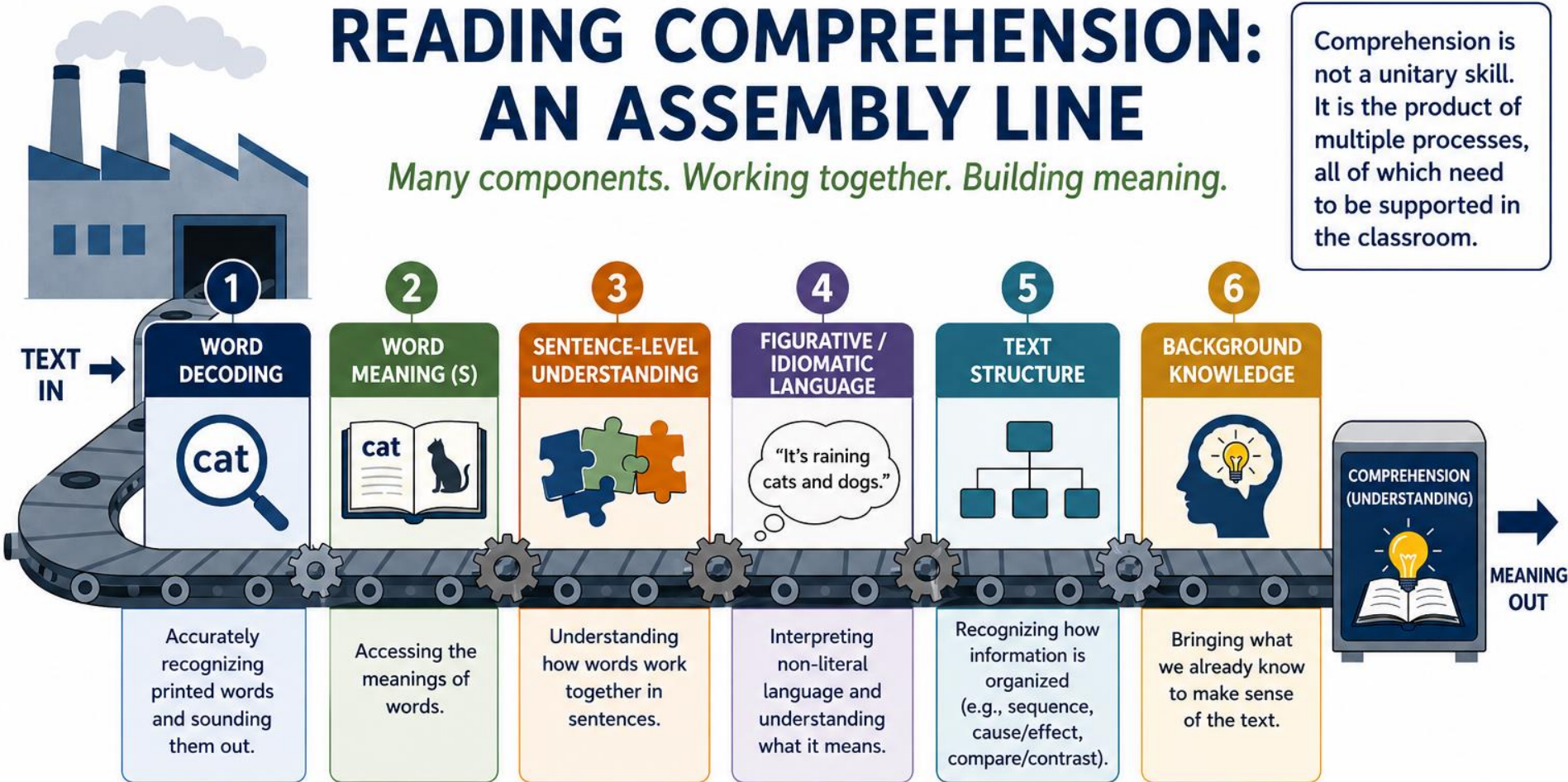
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READING COMPREHENSION: AN ASSEMBLY LINE

Many components. Working together. Building meaning.

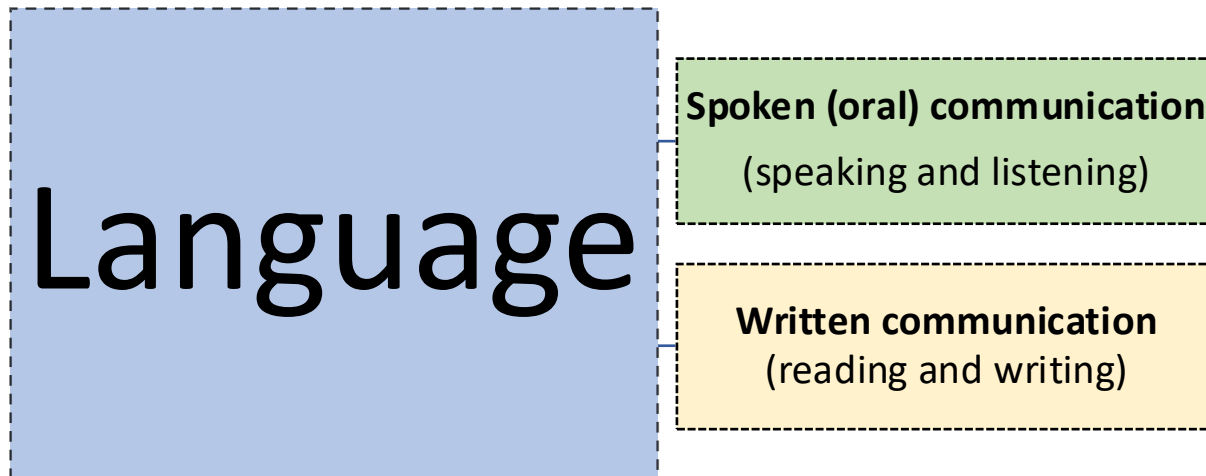
Comprehension is not a unitary skill. It is the product of multiple processes, all of which need to be supported in the classroom.



As Nancy Lewis Hennessey (2021) explains, reading comprehension is like a factory assembly line—meaning is constructed when each component does its job and passes the work to the next.

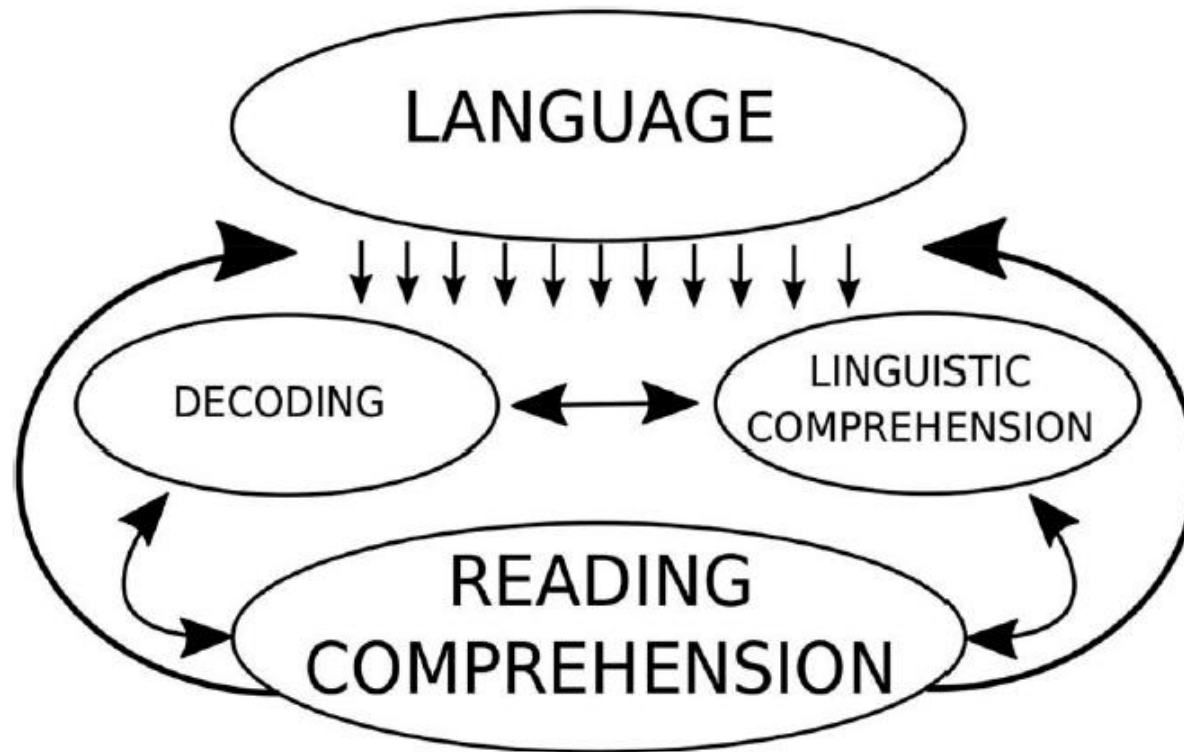


Based on Nancy Lewis Hennessey's (2021) reading comprehension factory assembly-line analogy. (The Reading Comprehension Blueprint. Brookes Publishing). Adapted by Pamela Snow (2026).



Source: **The Snow Report** <https://pamelasnow.blogspot.com/2026/01/why-big-six-should-actually-be-big-five.html>

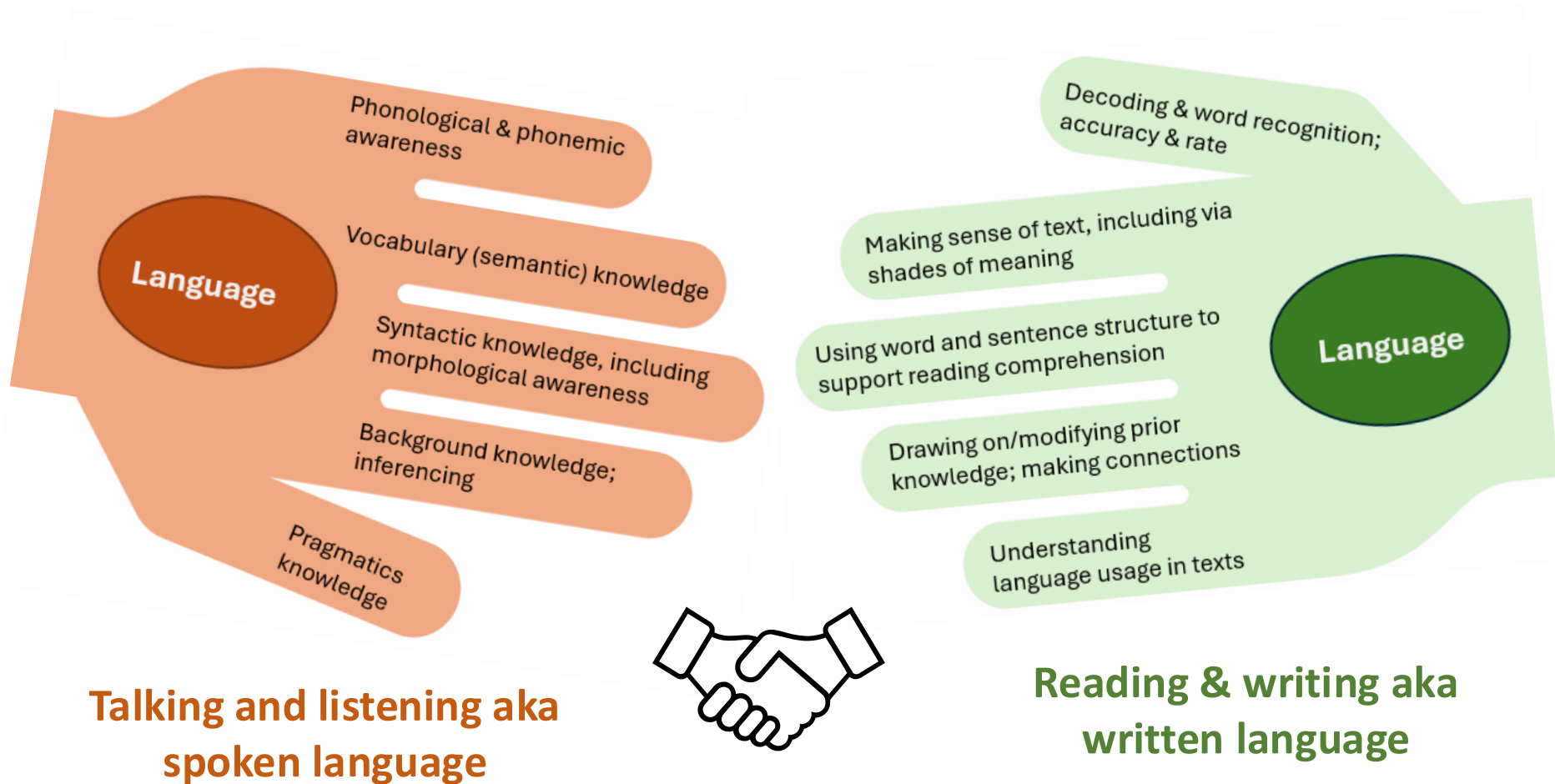




Nation, K. (2019). Children's reading difficulties, language, and reflections on the simple view of reading. *Australian Journal of Learning Difficulties*, 24 (1), 47-73, <https://doi.org/10.1080/19404158.2019.1609272>



Oral language and written language “shake hands” when we read and write



Source: The Snow Report <https://pamelasnow.blogspot.com/2026/01/why-big-six-should-actually-be-big-five.html>



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ORAL LANGUAGE

The foundation for all reading.

Strong oral language skills support and connect each of the Big Five.



PHONEMIC AWARENESS

The ability to hear, identify, and manipulate individual sounds (phonemes) in spoken words.



PHONICS

The ability to understand the relationship between letters (or letter patterns) and sounds and to use this knowledge to decode words.



VOCABULARY

The knowledge of words and their meanings that we use to understand and express ideas.



FLUENCY

The ability to read text accurately, quickly, and with appropriate expression.



COMPREHENSION

The ability to understand, make meaning of, and think critically about what we read.

All five pillars are grounded in oral language.

When we strengthen children's ability to listen, speak, and understand, we build the foundation for reading success.





Image source: MS PPT



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The SOLAR Lab: <https://solar.blogs.latrobe.edu.au/>



[@PCSnow1604](#) (Formerly @pamelasnow2)



The Snow Report: www.pamelasnow.blogspot.com





The Road to AIM's 2027 Research to Practice Symposium.

EXPLORE THE IMPACT OF LANGUAGE ON READING AND WRITING

Monday,
March 8, 2027

- Leading researchers + practical insights for educators and leaders
- Attend in person at Union League Liberty Hill outside of Philadelphia or join the **free** livestream
- **New for 2027:** The Research Exchange reception, featuring poster presentations and opportunities to connect
- Registration is now open
- Recordings provided

Wednesday,
October 21

Exit
03

Start At
6:00 PM ET

A Key First Step to Literacy: Early Risk Identification in Pediatric Practice



Dr. Shelley Gray
Professor Emeritus
in the College of Health Solutions,
Arizona State University



Dr. R.J. Risueño
Assistant Professor of
Speech-Language Pathology,
Midwestern University

Register
Today

