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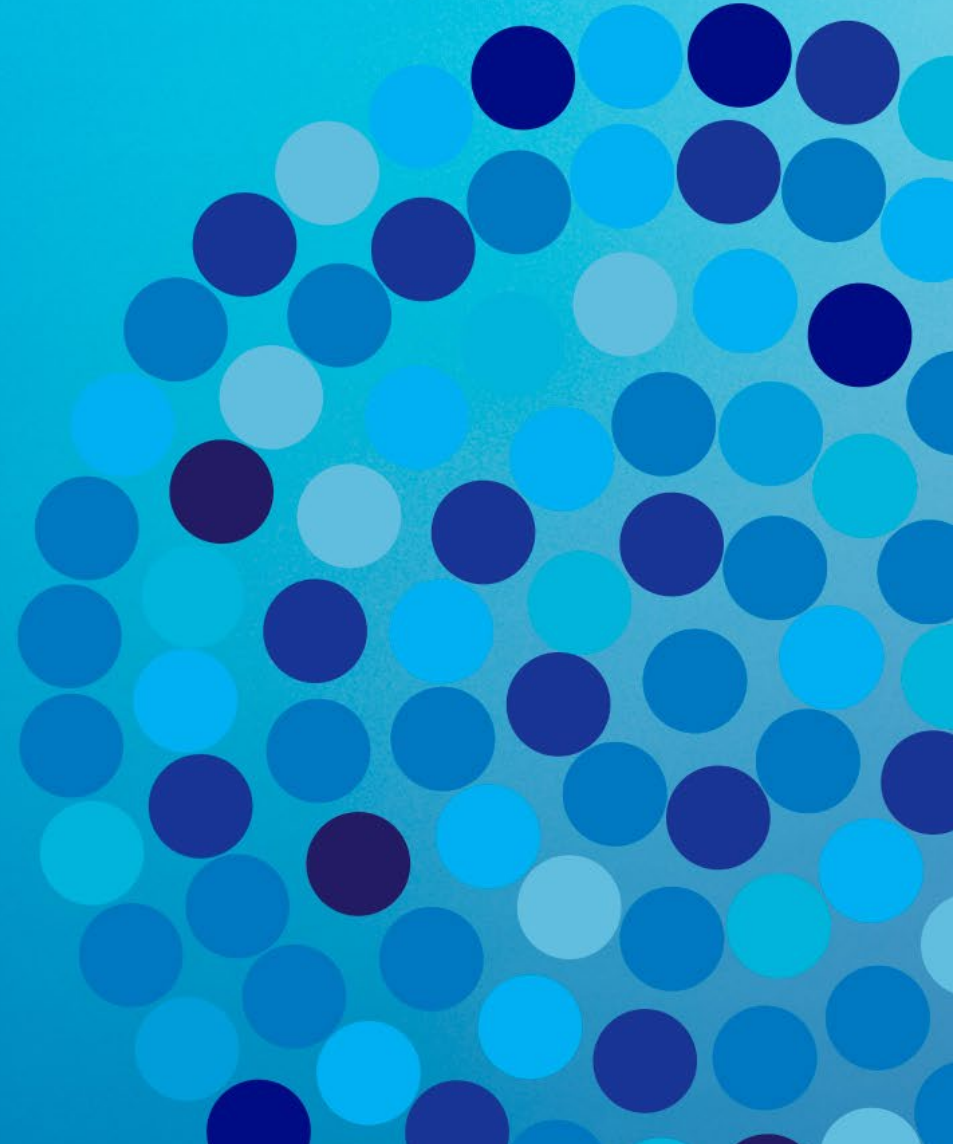


ACCESSIBLE
ASSESSMENT

Language and attention difficulties: Understanding the impacts and how to support your students



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PhD Candidate





ACKNOWLEDGEMENT OF TRADITIONAL OWNERS

QUT acknowledges the Turrbal and Yugara, as the First Nations owners of the lands where QUT now stands. We pay respect to their Elders, lores, customs and creation spirits. We recognise that these lands have always been places of teaching, research and learning.

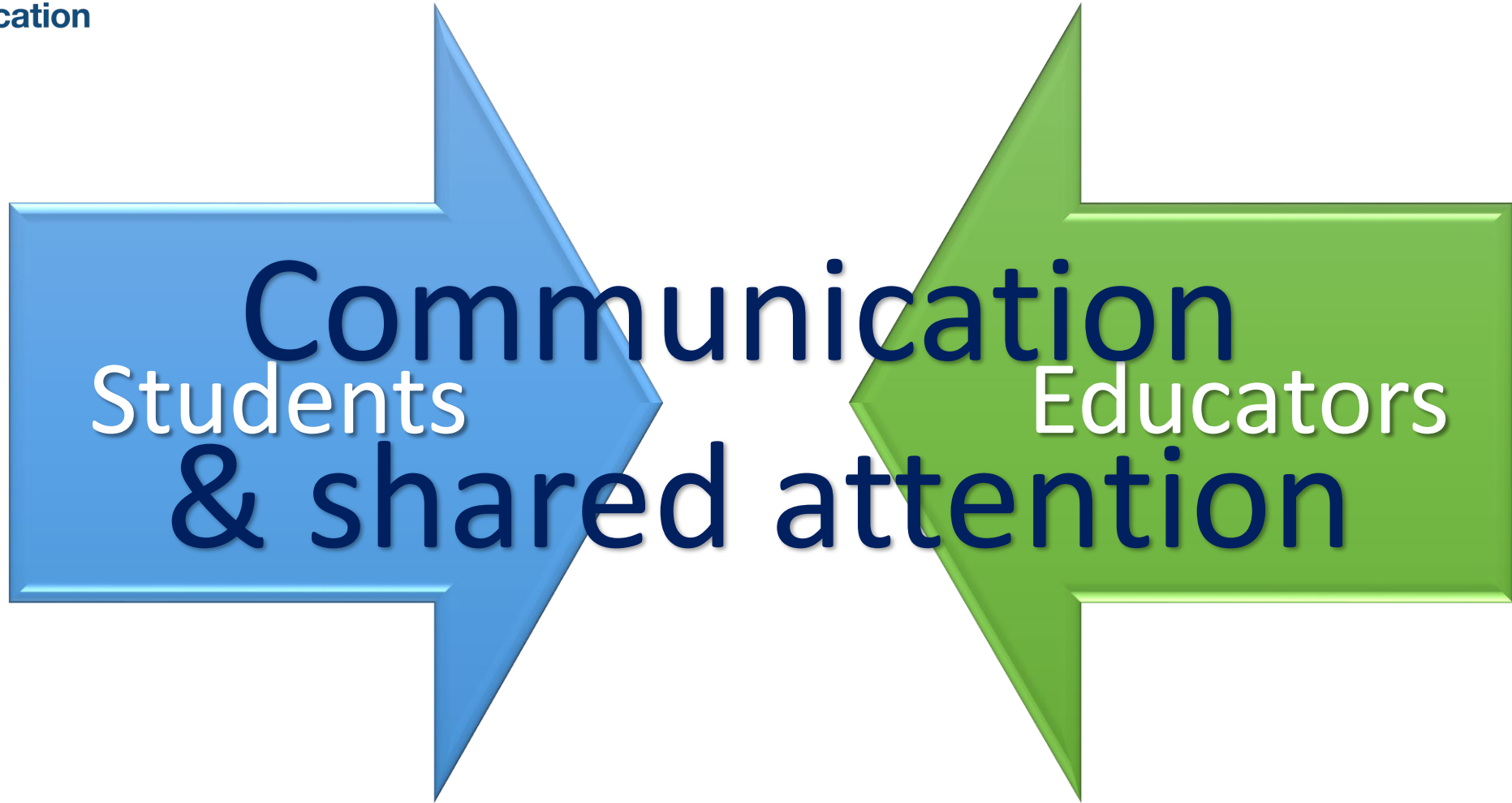
QUT acknowledges the important role Aboriginal and Torres Strait Islander people play within the QUT community.





Roadmap

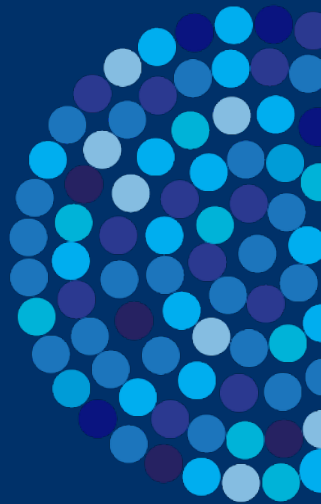
1. Cognitive processes that are important for learning
2. Language and attention difficulties
3. What do these students say helps them to learn?
4. What can educators do to support these students?



Comprehension

Pedagogy

Cognitive processes that are important for learning

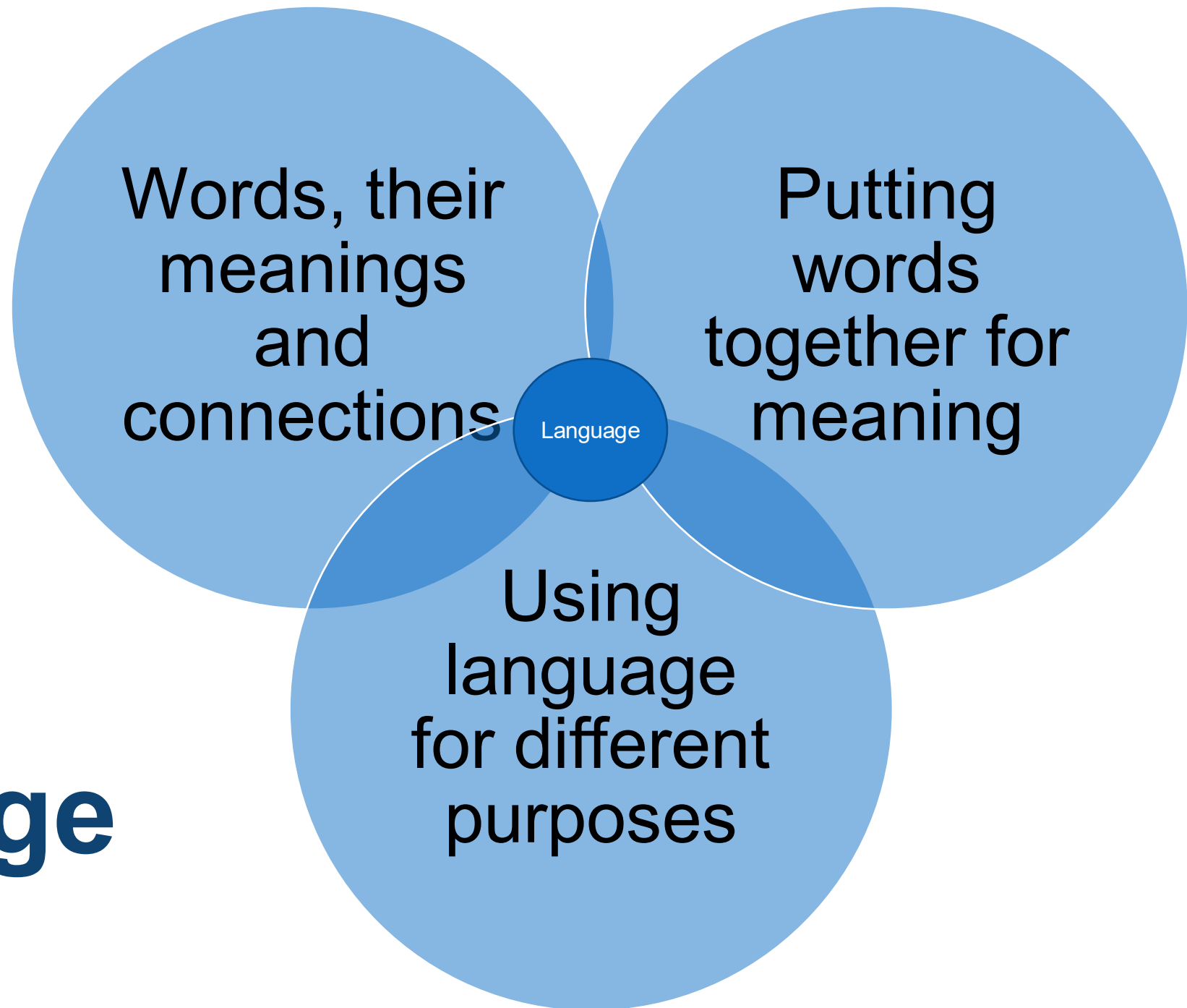


Some cognitive processes that are important for learning

- Attention
- Language
- Working memory and long-term memory

Attention





A model of language

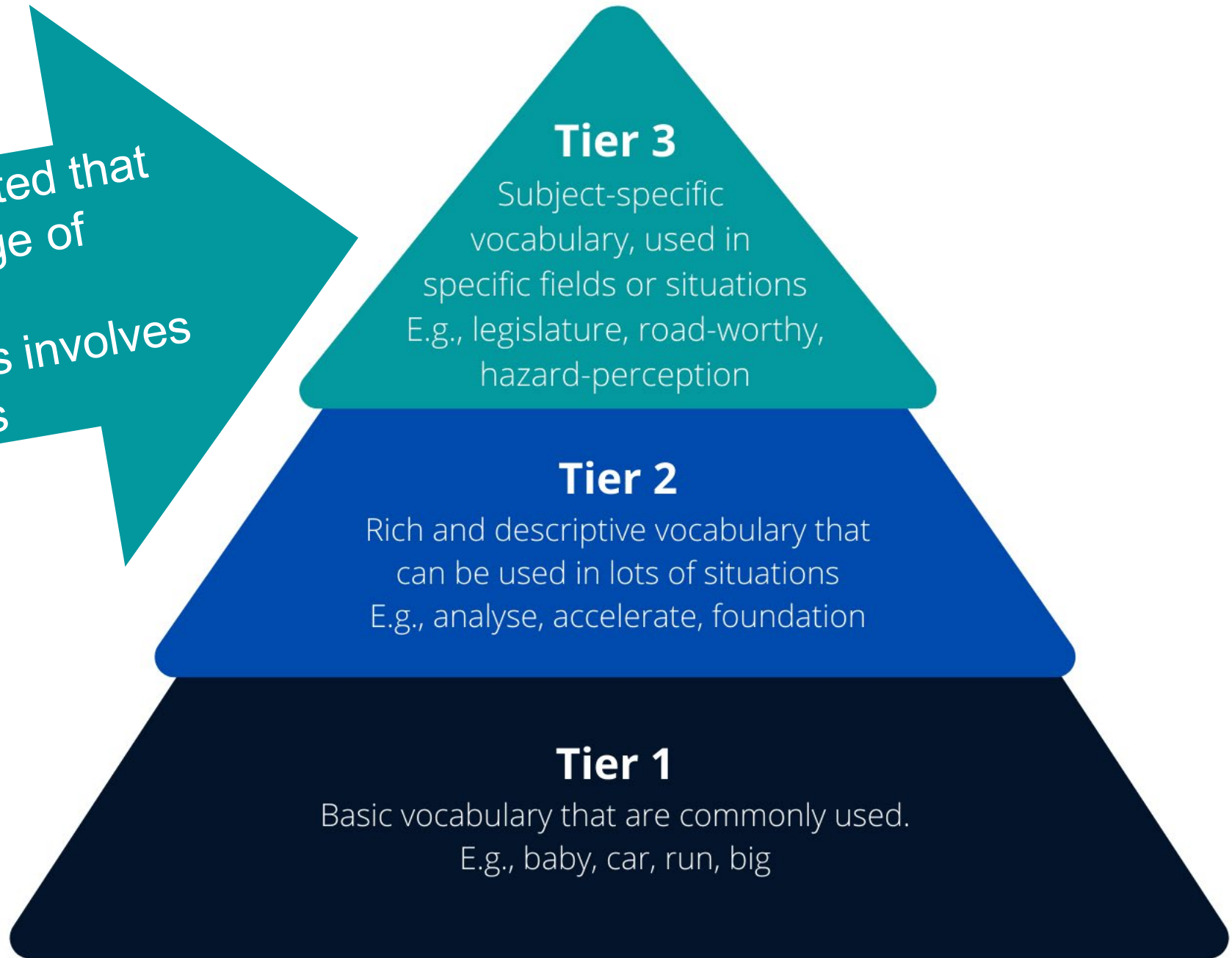
(Bloom & Lahey, 1978)

Number of known words in typical development



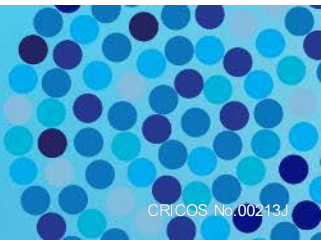
• It is easy to take for granted that students *share* knowledge of these words

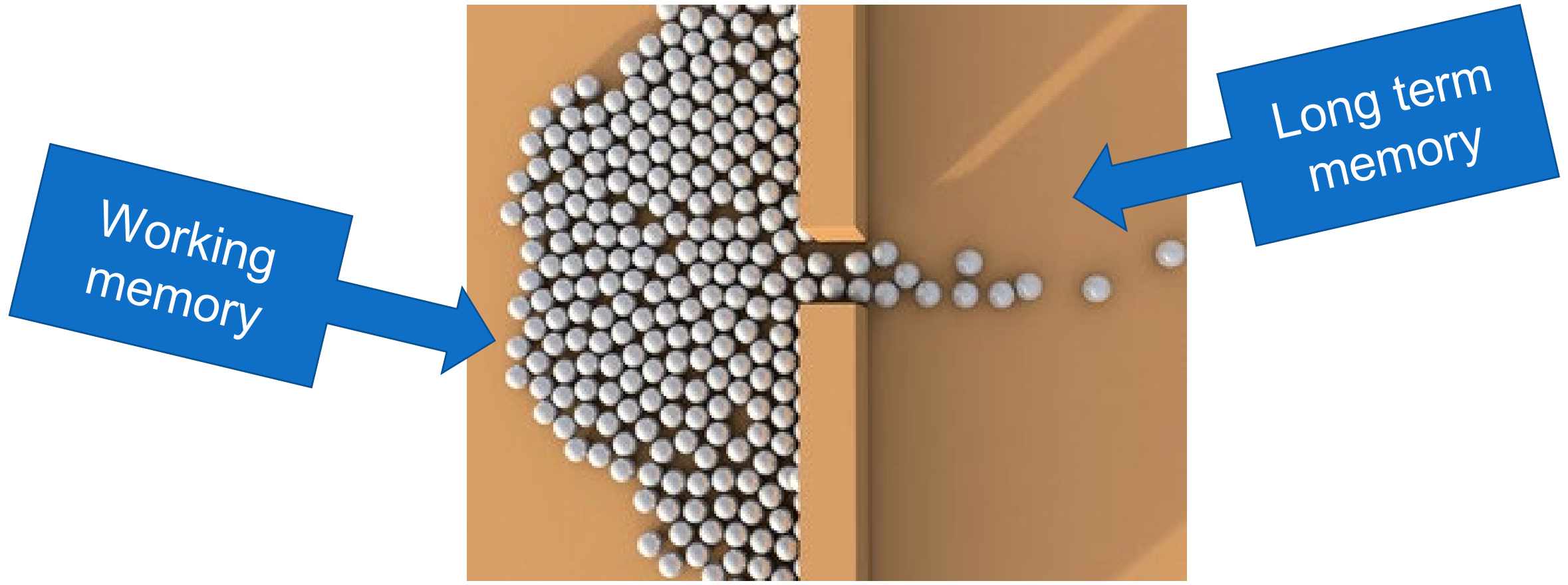
• Learning to drive means involves lots of new Tier 3 words



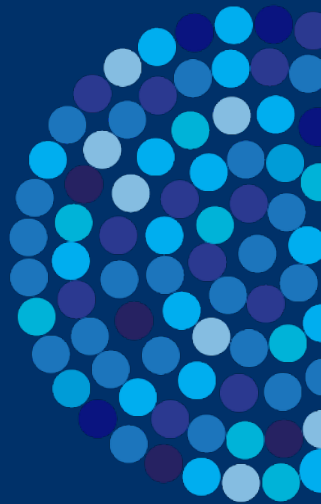
Working memory

- Our mental “note pad”
- Holds verbal and visual information
- Has time and capacity limitations
- Can only be “refreshed” by having the information shared again
- Long term memory and working memory work together





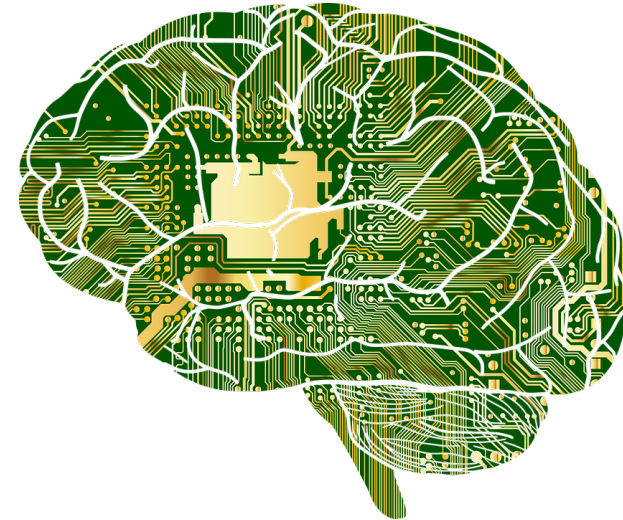
**What does this mean for the way
that instruction is provided?**



Cognitive load theory

Aims to “explain how the information processing load induced by learning tasks can affect students’ ability to process new information and to construct knowledge in long-term memory”

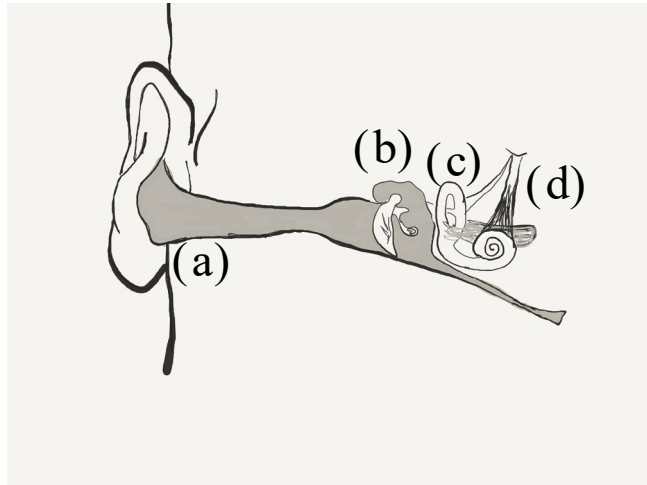
(Sweller et al., 2019, p. 261)



Split attention effect

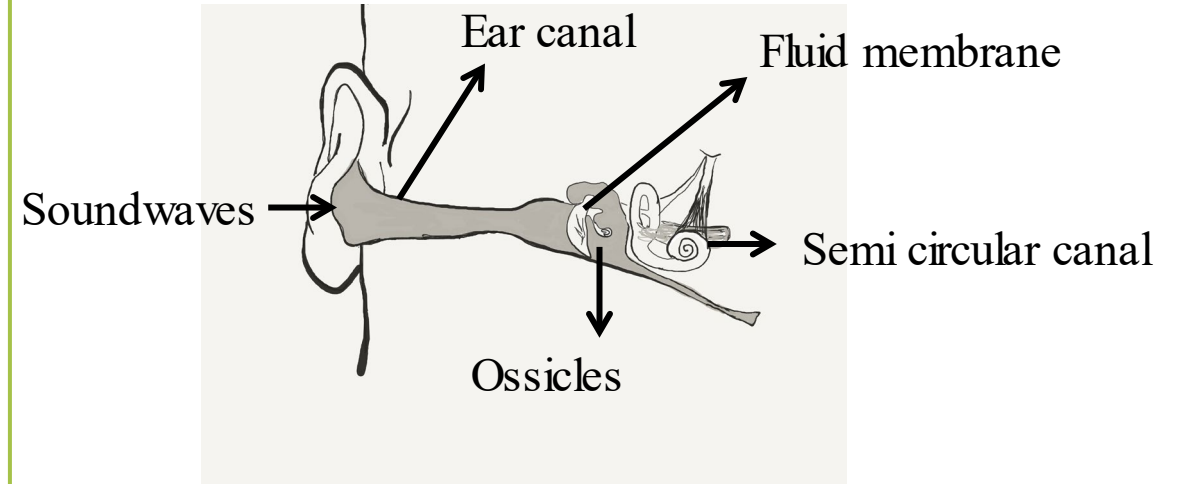
When students must integrate information from two or more sources to comprehend or solve a problem

(Sweller et al., 2019)



Outer ear

Soundwaves travel through the ear canal (a) and enter the eardrum (b), then the middle ear which comprises three ossicles (c), the fluid and membranes of the inner ear and semicircular canal (d)...



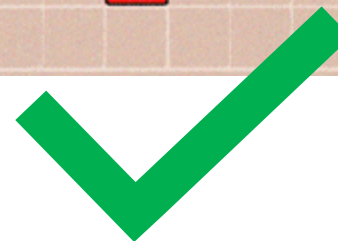
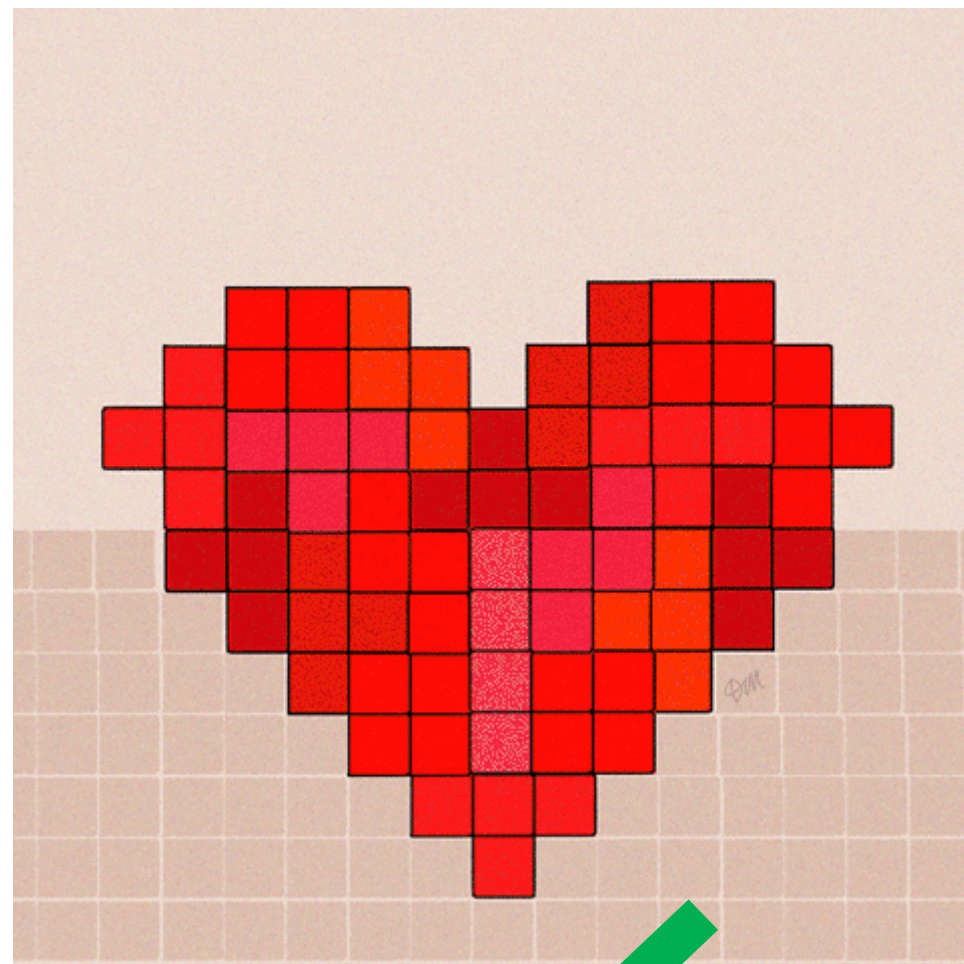
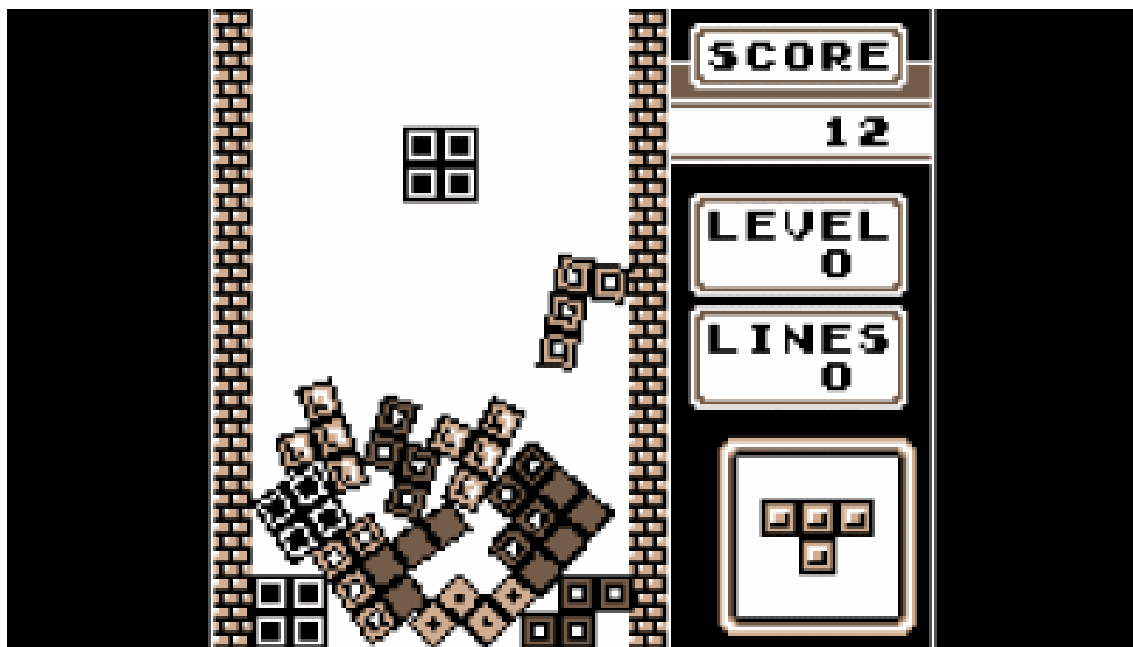
Outer ear

Seductive details effect

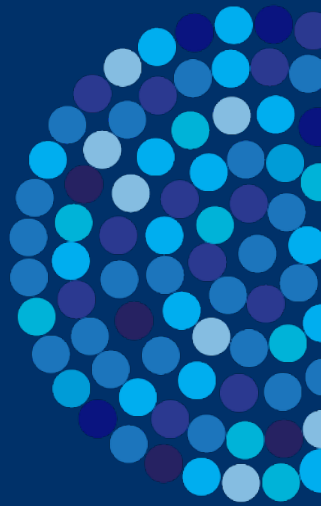
Occurs when learners' attention is directed to the seductive details rather than to the main content

(Harp & Mayer, 2018, Sundararajan & Adesope, 2020)





Language and attention difficulties





Write down the learning intentions and plan how to come up with

1. Learning intentions?
 2. Notebook?
 3. Five... sentences?
 Respond to... questions?

some I can't write statements for

the success criteria for not sure you use

five senses making sure you use

paragraph that the

multiple sentence

367. Next, copy down

1. Write learning intentions & success criteria.
 2. Page 367 of text & English notebook
 3. Write paragraph. Five senses my response to text.





What are language & attention difficulties?



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What we see, vs what sits under the surface...



Hyperactivity, behaviour,
friendship issues, passive
inattention, and more...

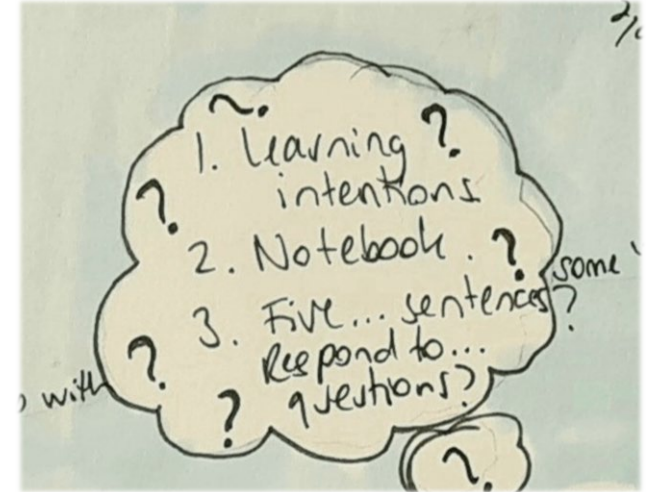
Difficulties with language,
literacy and numeracy,
attention, memory...

Developmental Language Disorder:

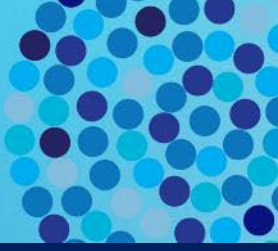
A neurodevelopmental disorder, specific to language production and/or processing. Impacts spoken, written and/or signed language

Attention Deficit Hyperactivity Disorder:

A neurodevelopmental disorder affecting executive function, characterised by developmentally inappropriate levels of inattention, hyperactivity and impulsivity.

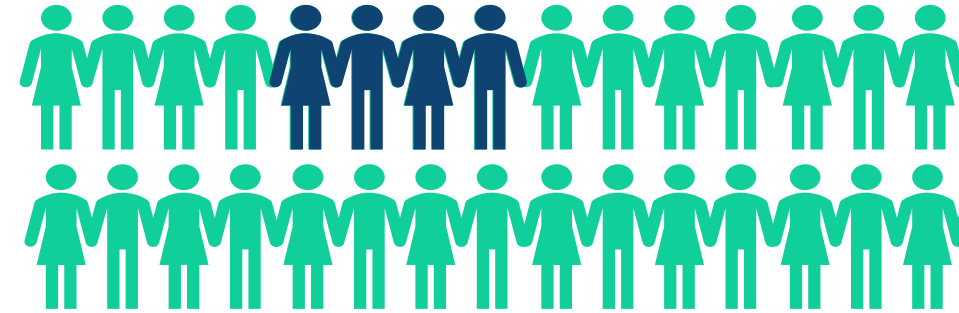


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Common to both...

- Under-identified – despite high prevalence
- Poorly understood
- Outward facing signs: literacy, behavioural, and social difficulties
- Underlying language, memory, and cognitive function difficulties that impact learning

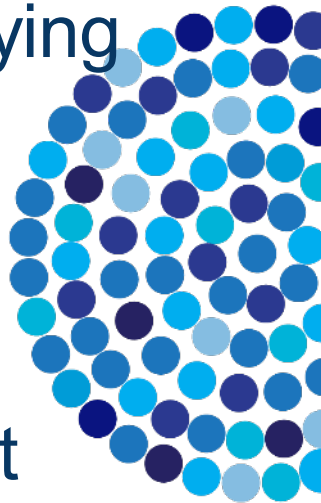


Negative impacts...

- Reduced access to post-secondary academic and vocational opportunities (Conti-Ramsden et al., 2018).
- Associated with behavioural issues (Ripley & Yuill, 2005),
- Increased risk of social emotional concerns (Snow, 2018)
- Difficulty with social relationships (Durkin et al., 2017)
- Lower levels of independence and reduced job prospects (Cronin et al., 2020).

Common learning characteristics

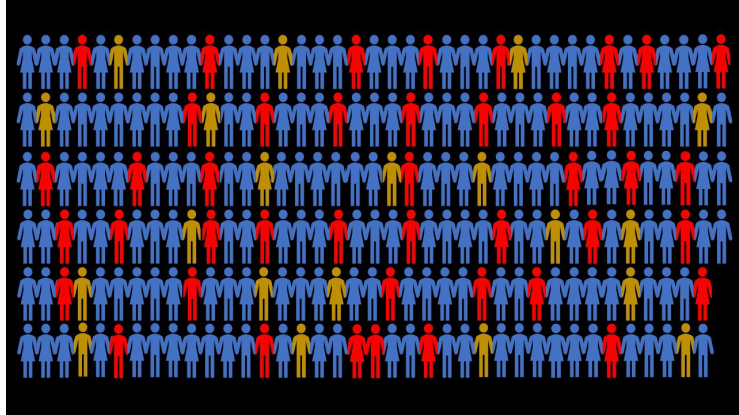
- Difficulty with language storage and retrieval
- Difficulty understanding and responding to instructions
- Limited vocabulary
- May not understand multiple word meanings/literal interpretations
- Difficulty linking ideas
- Difficulty concentrating, paying attention, staying on task
- Difficulty prioritising, organising and coordinating
- Difficulty distinguishing between un/important information



Common behavioural characteristics

- Gets in trouble for not following instructions
- May misinterpret social cues and jokes
- Difficulty creating texts, slow at starting, quick to avoid/give up
- Difficulty linking ideas, lack coherence, can sound untruthful
- May not “say what they mean” – can appear tactless or rude
- Loses belongings, is unprepared for class
- Can appear forgetful, lazy, or disinterested.

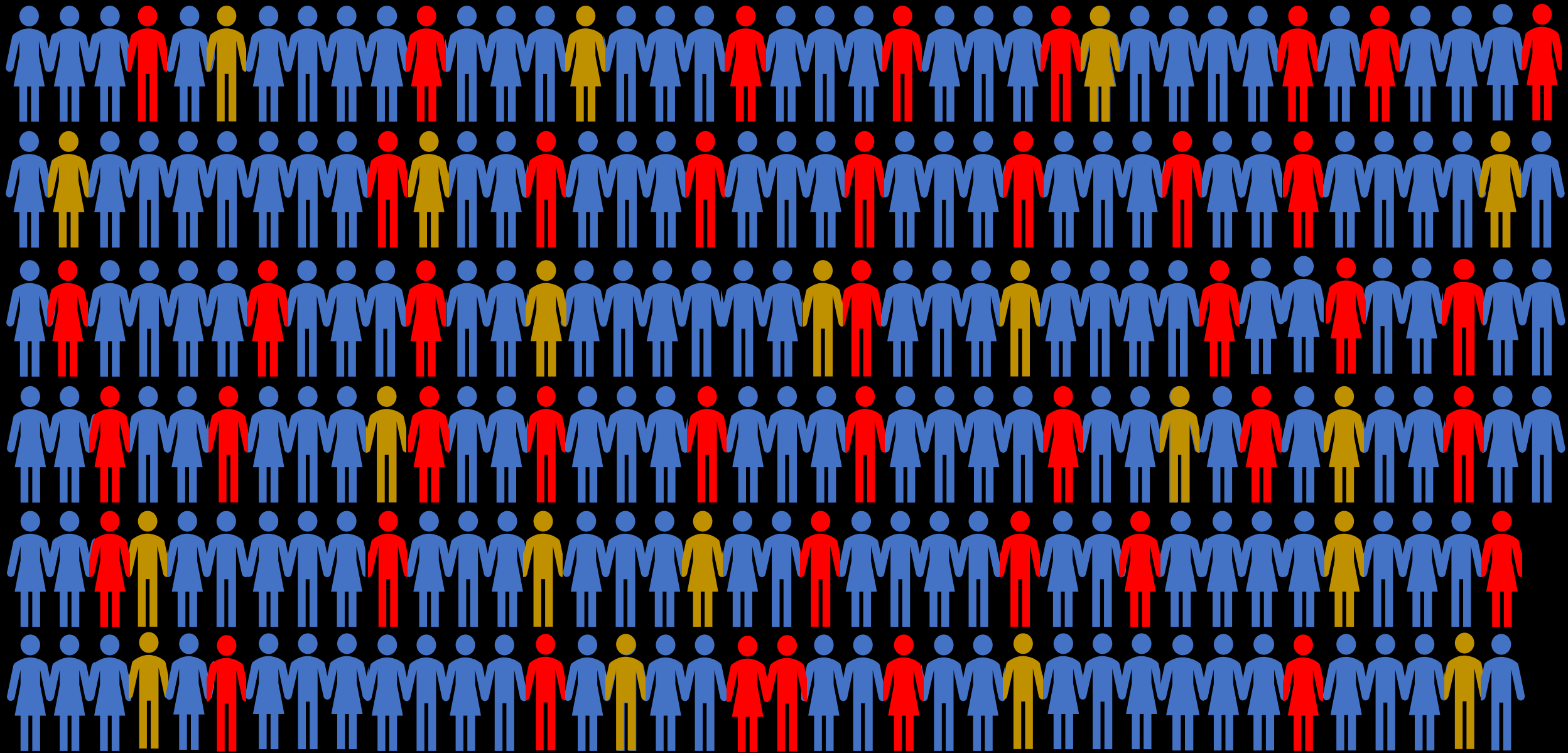




ACCESSIBLE
ASSESSMENT

What am I learning in my current research?

- 232 students recruited in total
- Parent-completed language and attention screening measures: 63 students identified across the three Partner schools (28% of total)
- **One third** were previously identified as having language and/or attention difficulties
- Two thirds had been missed. Their difficulties were previously unidentified.
- **Already:** Students are displaying clinically significant language difficulties, attentional difficulties, or both language and attentional difficulties.

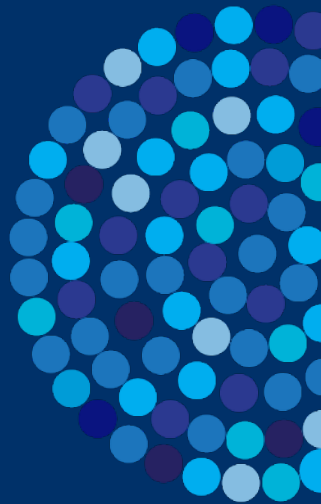


Clearly, we do not always know which students experience language and attention difficulties...



But, these students don't want something different to their peers.

**So... what do these students say
helps them to learn?**



What Makes an Excellent Teacher? Insights From Junior High School Students With a History of Disruptive Behavior



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Haley Tancredi and



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Evidence of the powerful relationship between what teachers do and how effectively their students learn has led to reforms aimed at improving the quality of teaching. Most jurisdictions are now paying increased attention both to the initial and ongoing education of teachers, as well as methods to assess, reward and improve quality teaching. Predominant among these methods are frameworks that define observable elements of pedagogical practice for which there is evidence of benefit for student learning, engagement, and behavior. However, we contend that even the best of these do not go far enough, as they do not explicitly consider students with disability, even those students with so-called “high-incidence” disabilities enrolled in everyday classrooms—such as those with Attention Deficit Hyperactivity Disorder and Developmental Language Disorder—whose classroom behavior often indicates that their learning needs are not being met. In this manuscript, we report findings from in-depth interviews with 50 Grade 7–10 students with a history of disruptive and disengaged behavior from three secondary schools serving disadvantaged communities. Responses to the question “what makes an excellent teacher” were coded into four categories. Three of the four categories (emotional support, classroom organization, and instructional support) reflect internationally accepted domains of quality teaching, while the fourth, teachers’ temperament and personality, was added to gauge accuracy of the common belief that this is the element students care most about. Analysis yielded novel results with the majority of students emphasizing instructional support practices that are not well represented in most measures of quality teaching. We argue that these practices represent an essential—but often absent—“top layer” of clarity and accessibility that is necessary for “quality teaching” to be inclusive teaching.

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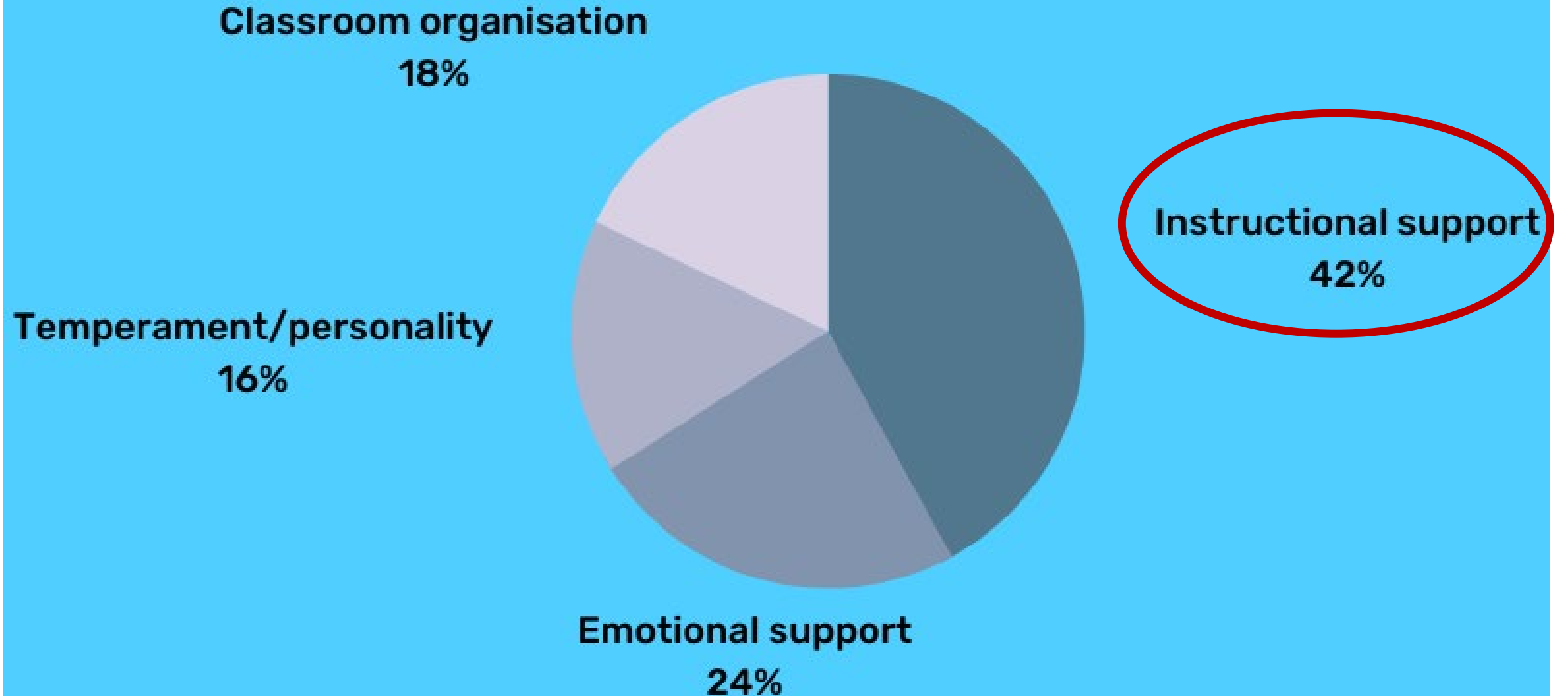
SHARE ON



What did we do?

- 50 students aged 12-16 years in Grades 7–10, from three schools
- All schools serviced disadvantaged communities
- All students were in the behaviour “red zone”
- Individual semi-structured interviews
- One question was: “What makes an excellent teacher?,” which was followed by the prompt, “What do those teachers do and how does it help you to learn?”
- Responses were coded into four categories: (i) emotional support, (ii) classroom organisation, (iii) instructional support, and (iv) “temperament/personality.”

We coded their responses into four categories.



Excellent teachers are those who provide to help students understand and learn.

“She helps us if we’re really stuck, she makes sure we know what we’re doing”
(Grade 9, School A).

“excellent” teachers:
“spend a lot of time on explaining it to make us understand it”
(Grade 7, School C).

“If you’re having trouble she’ll come and describe - do it in a different way until you get how to do it.”
(Grade 8, School C).

“excellent teachers” reiterated key points and used a range of teaching strategies to help convey information and concepts.

Excellent teachers check understanding of content and instructions

“The way they teach, how much help they give to the one certain student and stuff. Because we get more help, if you don’t understand she’ll help you, or they’ll help you”
(Grade 9, School D).

“The way he explains it. Say he makes a story, because he knows a story about everything, pretty much”
(Grade 9, School D).

Excellent teachers use familiar concepts to explain new information.

teachers using familiar concepts to explain new information, saying:

“If you’re having trouble she’ll come and describe - do it in a different way until you get how to do it.”
(Grade 8, School C).

Based on the proportion of students who pointed to instructional support, we probed further:

WHAT DO YOU THINK WOULD
MAKE LEARNING EASIER
FOR YOU?



Teachers talking
slower



Teachers explaining
things more clearly



Teachers checking in
with you more often



Having a buddy to sit
with who can help
explain



Teachers writing
instructions on the
board

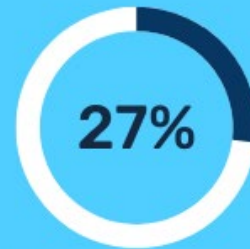


Teachers giving regular
reminders of what you
are meant to be doing

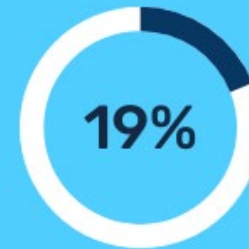


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We are extending this work in the Accessible Assessment ARC Linkage by asking Grade 10 students with language and/or attentional difficulties about the teaching skill they think is most important to them. So far, they have told us:



Teachers who are friendly, have a good sense of humor, and make learning fun



Teachers who make time to listen to me and who care about me as a person

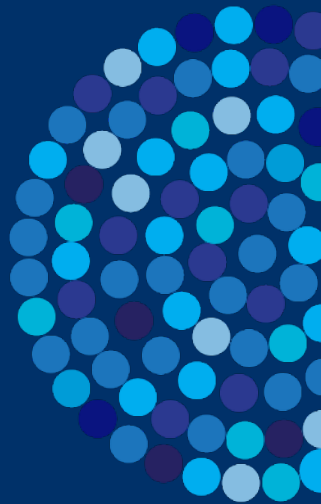


Teachers who are organised, use routines, and keep the class under control



Teachers who help me to learn by explaining things well and providing examples

So... what can educators do?



How can we use what we know about language and attentional difficulties to support all students?



Beneficial to all, essential for some

Key principles: Language

- Less is more. Aim for brevity
- Be specific, stick to the point and avoid “seductive details”
- Avoid complex words and sentences during new learning
- Explicitly teach important new words and revisit them multiple times
- Confirm students’ understanding of “new” words
- Provide student-friendly definitions
- Repetition (repetition, repetition, repetition)

Like I said, you need to remember what to do first, then check yourself and make sure you don't get distracted.
Any questions?

So, tell me what you need to do.



Too complex and non-specific

Simple, but not simplistic

Key principles: Attention

- Consider visual and auditory distractions, and remove them where possible
- Be explicit and help students to focus their attention
- Clearly identify important vs unimportant information or stimuli
- Support organisation. Assume nothing!
- Provide breaks to support self-regulation and reduce overload
- Have clear learning goals for each lesson in mind. Minimise instruction or activities that deviate from these goals.

Key principles: Working memory

- Be aware of limitations (approx. 5 items and/or 20 seconds)
- Provide reiteration, using the same language/imagery
- Build routines and shared knowledge
- Don't overload working memory. More examples are not always better!
- Unfamiliar words or tasks will tax working memory. Provide time, repetition, and additional practice and explanations.
- Watch your pace (aim for Goldilocks pace – not too fast, not too slow, just right!)
- Build in pauses for comprehension time

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Key principles: Visual aids

- Keep visual resources short, sharp, and shiny
- Video-record demonstrations (e.g., can students do this on their phone?)
- Visual aides (e.g., handouts or annotated photographs) can support students to learn equipment names, key words, or processes
- Ensure that visual aids align with what is said verbally
- Maintain that “Goldilocks pace” for narration in video resources



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Thank you!



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