

Mind what you say!

How talk contributes to learning in our youngest children

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FROM VISION TO ACTION



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“Languagizing their world”

(Hirsch-Pasek, K. & Golinkoff, R.M. (2018). Zero to Three, 38(3), 12-18.)



Ethan is on a mat, engrossed in the various toys that have been scattered around. Ethan holds this cup carefully in his hands and rotates it. He looks up at a nearby educator who smiles at him, nods and says ‘Wow!’ Ethan returns to his exploration.



Louie and Mia are sitting with their educator. They are both engrossed with these plastic cylinders. Louie looks up at his educator, who says “Can you put the green one on top?” Louie places it carefully and the educator responds with “That’s the way. It’s a bit tricky!” Mia watches on with interest.

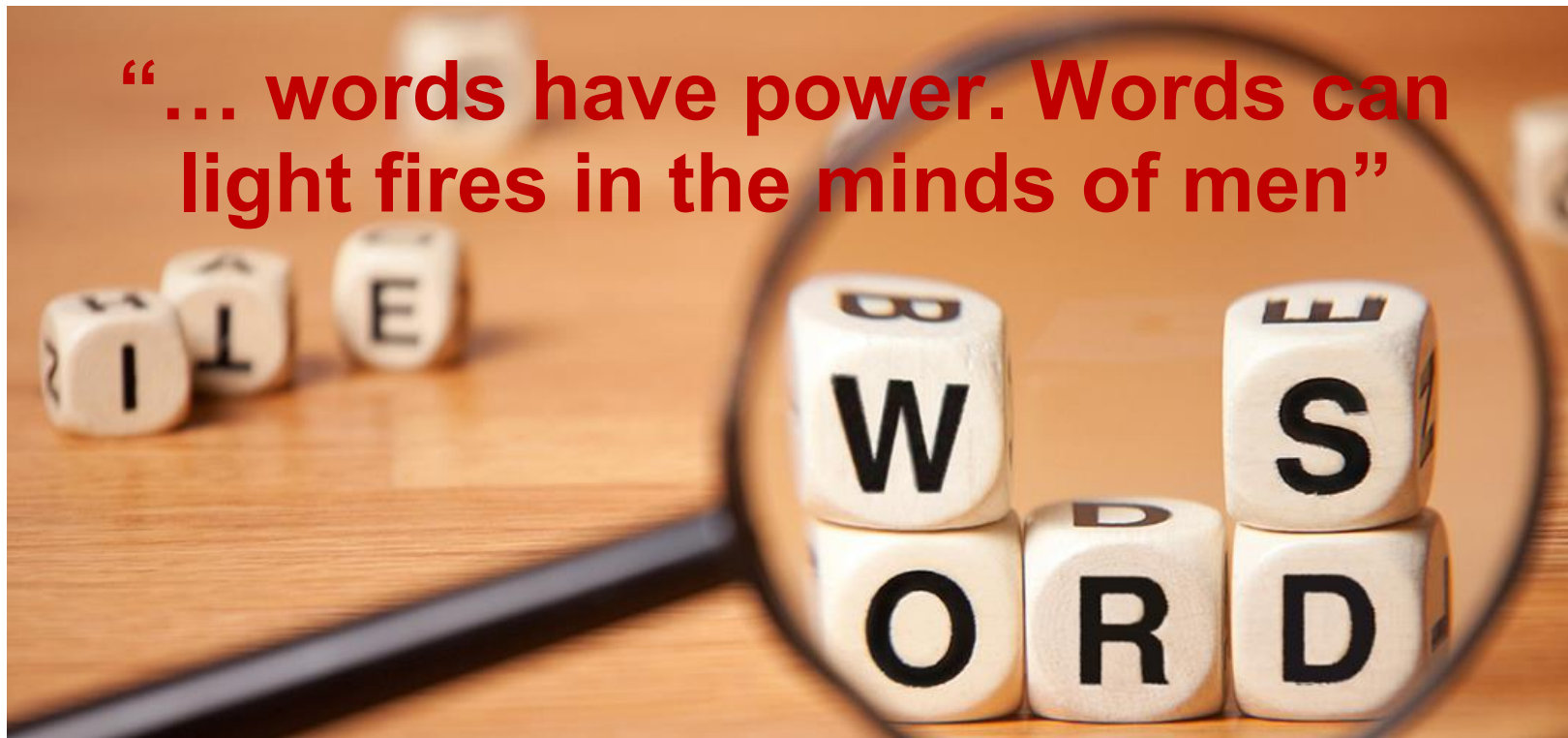


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**“... words have power. Words can
light fires in the minds of men”**



(PATRICK ROTHFUSS, *THE NAME OF THE WIND*)



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Why are words powerful?



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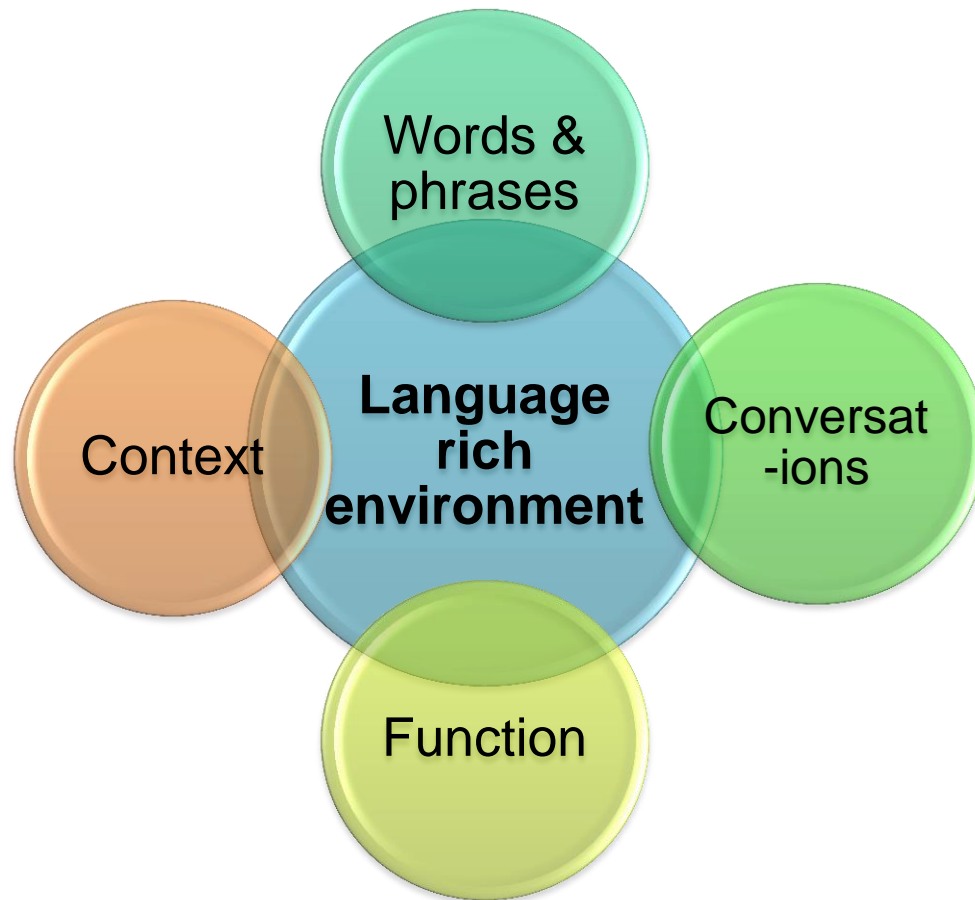
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Why are words powerful?



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.... learning occurs in social contexts and that interactions and conversations are **vitaly important for learning**

....**learning is co-constructed** through interactions between the educator and each child.

.... engage in sustained shared conversations with children to **extend their thinking**



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A close-up photograph of two hands clasped together. The hand on the left is an adult's, with a blue braided cord bracelet on the wrist. The hand on the right is a child's, smaller and with lighter skin. The hands are positioned palm-to-palm, fingers interlaced. The background is a solid, muted reddish-brown color.

“When children learn language, they are not simply engaging in one kind of learning among many; rather, they are learning the foundation of learning itself”

(Michael Halliday, 1993, p. 93)



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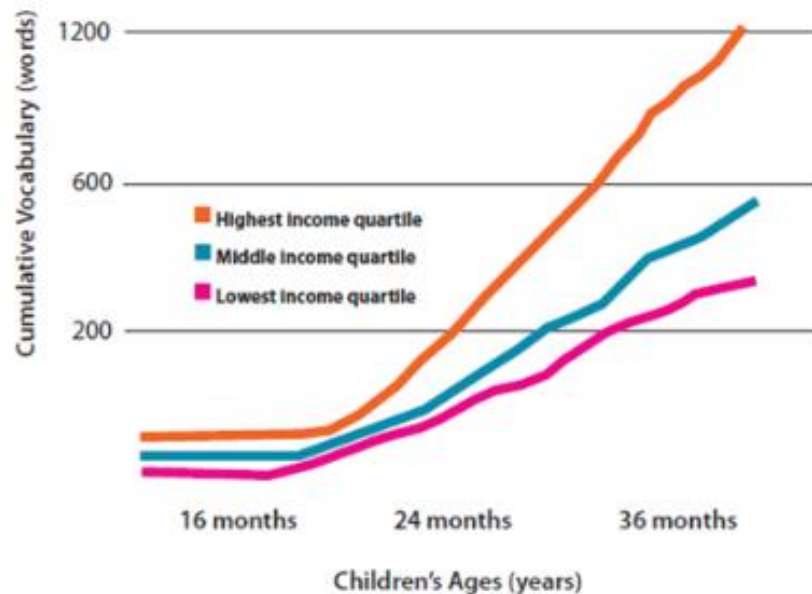
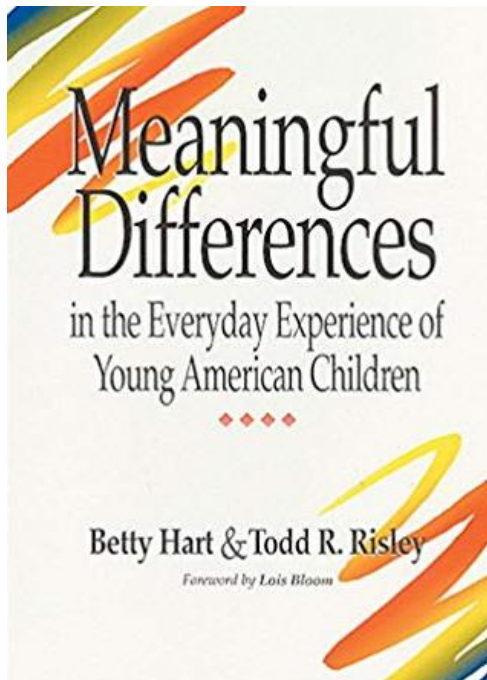


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1. Quantity matters



Source: Hart & Risley (1995)



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Statistical learning

Compute the standard deviation for 15, 15, 19, 21, 13, 13

1st compute mean, $\bar{x} = \frac{\sum x}{n} = \frac{15+15+19+21+13+13}{6} = \frac{96}{6} = 16$

2nd compute the standard deviation formula

$$S = \sqrt{\frac{\sum (x - \bar{x})^2}{n}}$$

3rd Lay out table using order of operation

x	x - \bar{x}	(x - \bar{x}) ²
13	13 - 16 = -3	(-3) ² = 9
13	13 - 16 = -3	(-3) ² = 9
15	15 - 16 = -1	(-1) ² = 1
15	15 - 16 = -1	(-1) ² = 1
19	19 - 16 = 3	(3) ² = 9
21	21 - 16 = 5	(5) ² = 25
$\sum (x - \bar{x}) = 0$		$\sum (x - \bar{x})^2 = 54$



Statistical learning



Which combinations did you hear?

Y	J	A	X	E	N	H	N	O	R
B	S	A	L	Y	H	K	N	R	G
E	B	T	I	E	R	F	S	X	T
Y	I	L	U	F	G	H	J	M	A
S	G	U	L	Y	W	K	V	G	D
K	O	D	A	T	I	B	A	V	U
T	K	E	D	J	L	I	J	L	P
G	U	B	U	L	A	D	O	H	A
I	J	F	O	V	D	Z	D	V	B
L	G	N	W	X	X	V	J	L	X

bulado

bigoku

datiba

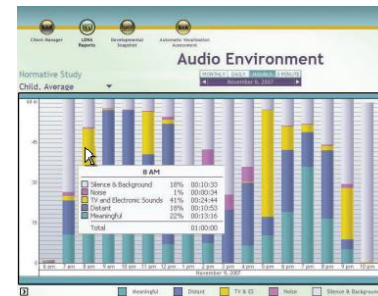
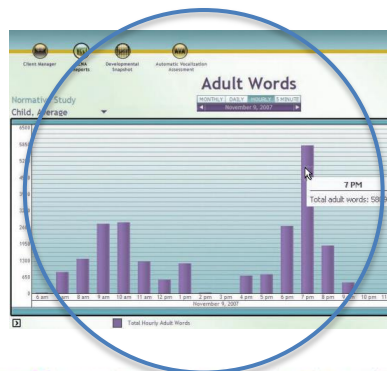
tadupa



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How did we measure quantity?



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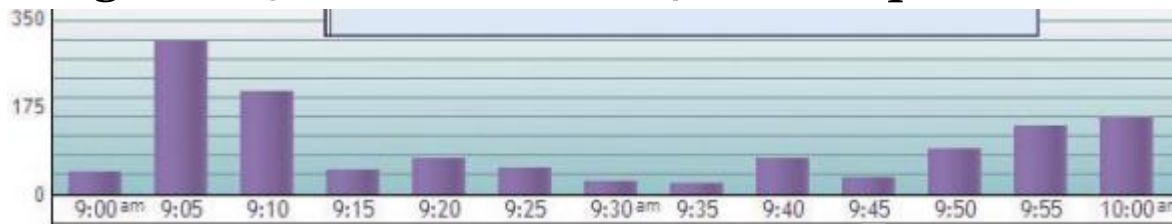
Variation in quantity

Average = 22 clear words per minute

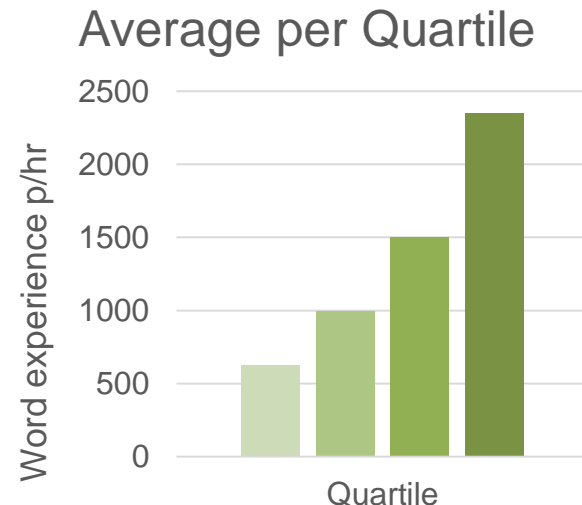
Lowest = 5.7 words per minute (over 3 hours)

Lowest 25% of centres) < 11 words per minute

Highest 25% of centres) > 40 words per minute



Degotardi, S., Han, F., & Torr, J. (2018). Infants' experience with 'near and clear' educator talk: individual variation and its relationship to indicators of quality. *International Journal of Early Years Education*, 26(3), 278-294.
doi:10.1080/09669760.2018.147963



Please put your hat on. We're going to play outside now.



“.... many children experienced what we are calling ‘language isolation’”

Hannon, S.M. (2019) It's time to shine a light on language isolation in infant toddler classrooms. <https://www.lena.org/classroom-language-isolation/>



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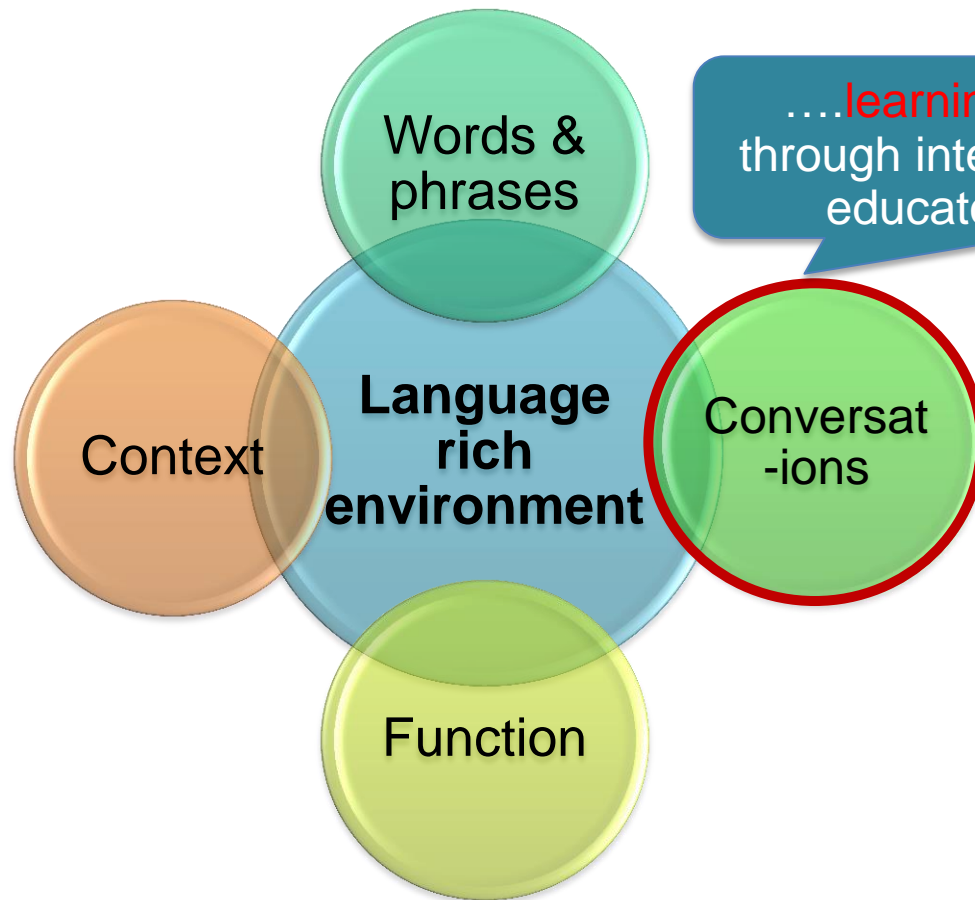
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‘More language input’ all by itself will not close the 30 million word gap; it will take better language input, input more adapted to child interests and input in the context of which rich conceptual structures can be built.

Snow, C. (2017). The role of vocabulary versus knowledge in children’s language learning: a fifty year perspective. *Infancia y Aprendizaje*, 40, 1-18





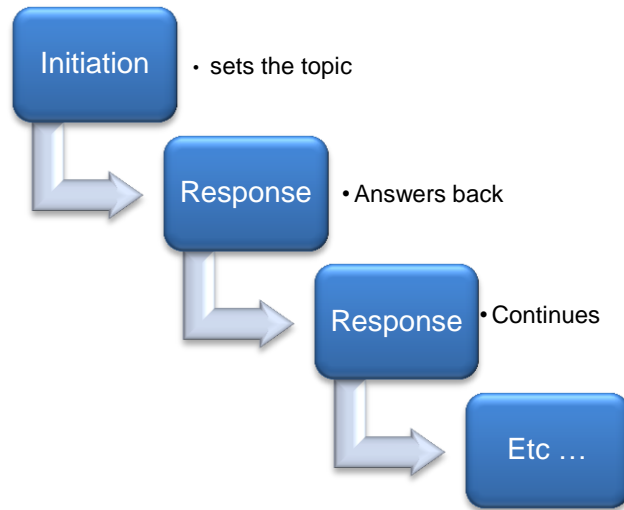
....learning is co-constructed through interactions between the educator and each child.



2. Conversations Matter



What 'makes' a conversation?



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Why are conversations powerful?



The infant constructs a beginning lexicon *in collaboration* with at least one other user of the language, in *shared activities* where the two may interpret *each other's* collaborative intentions (Nelson, 2007, p.117).

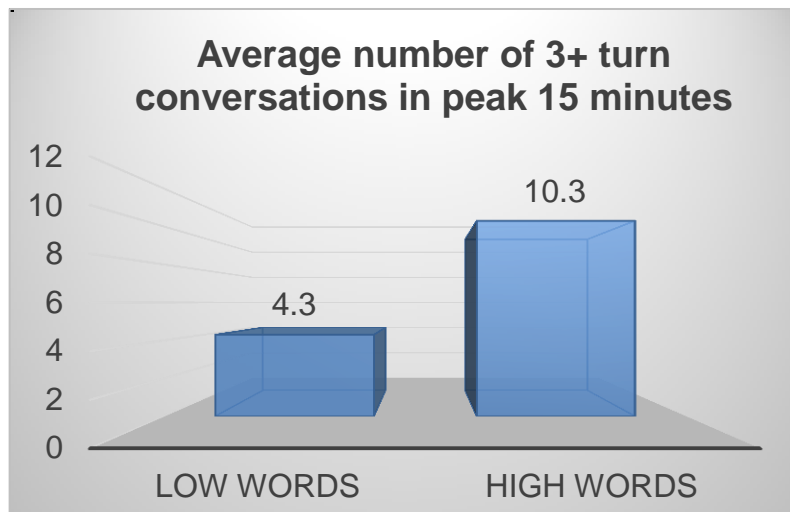


Initiation

Response 1

Response 2

We asked: Were the conversations of infants who heard a lot of words different from those who heard only a few?



But did the function of these conversations differ?

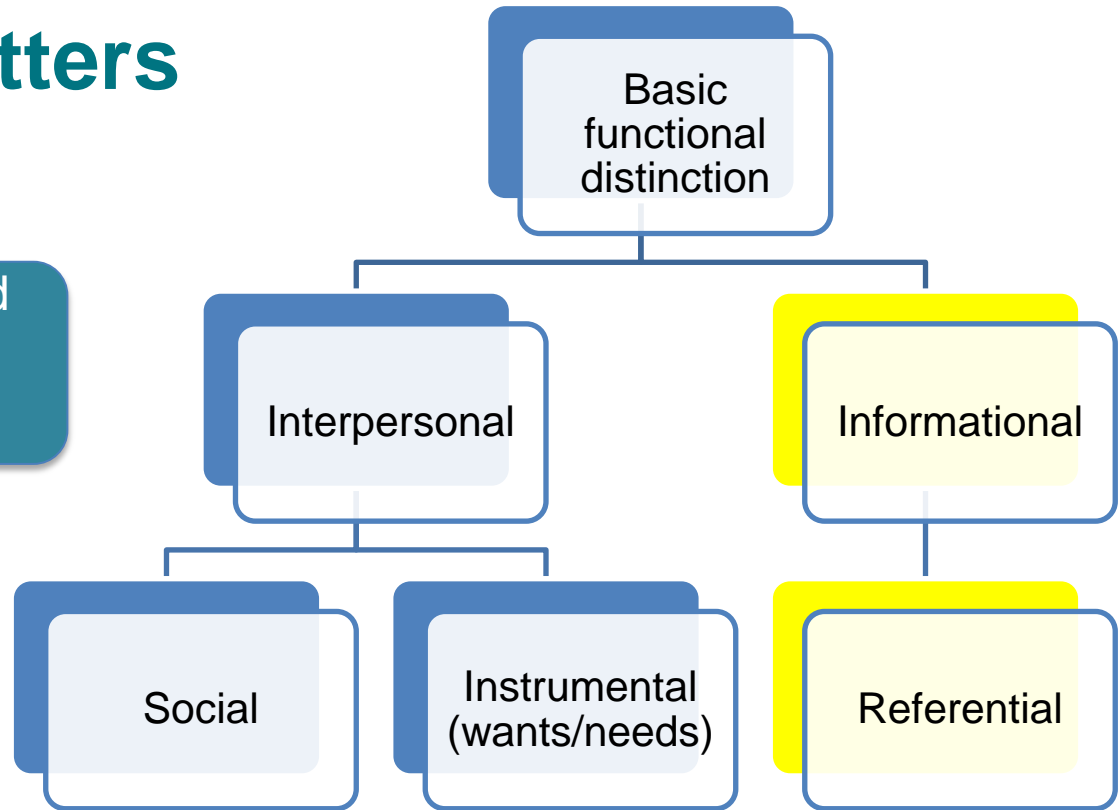


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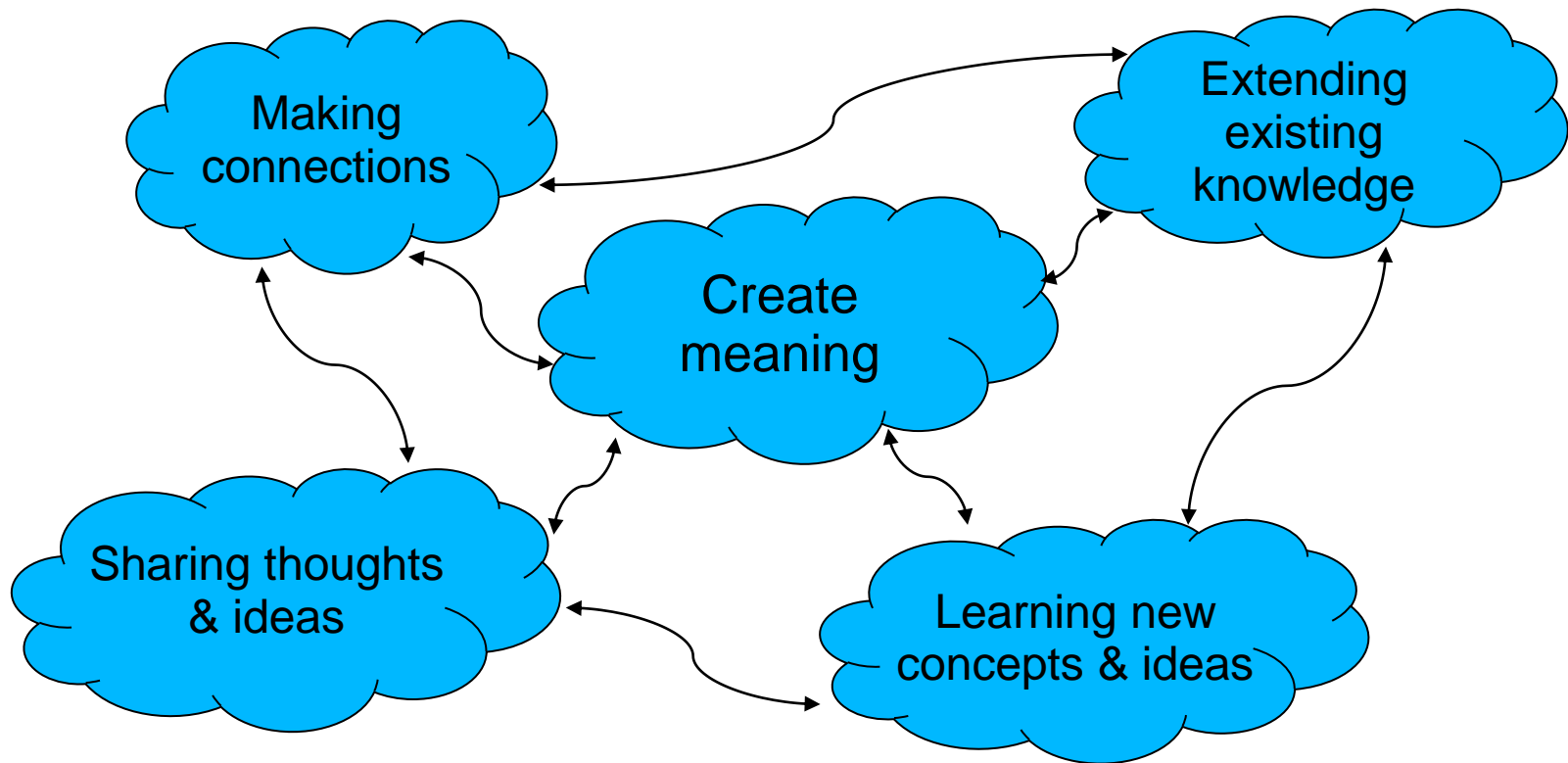
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3. Function Matters

.... engage in sustained shared conversations with children to
extend their thinking



What characterises a referential conversation?



Initiation

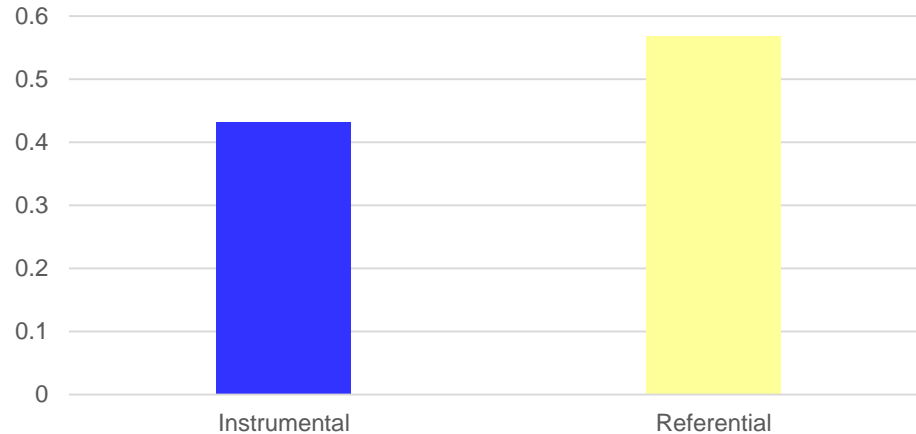
Response 1

Response 2

Instrumental

Referential

Number of Instrumental vs Referential
conversations in peak 15 minutes of talk



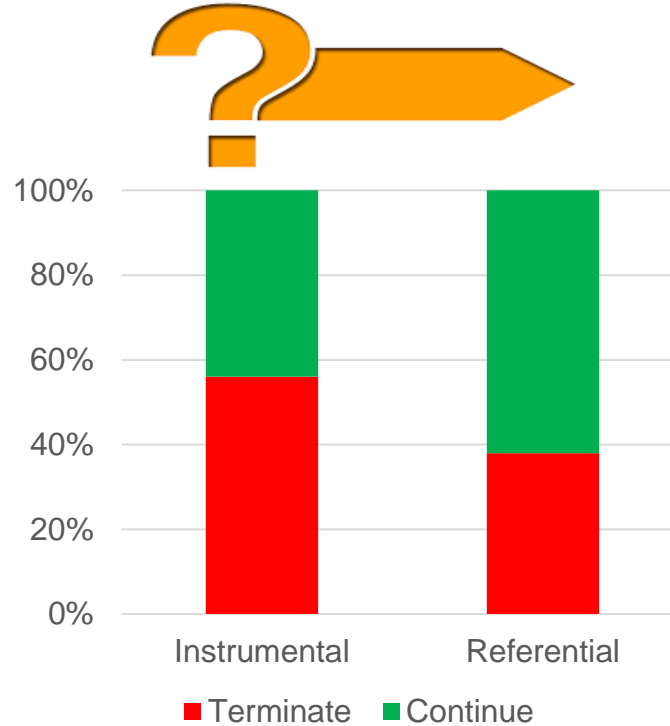
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Instrumental

Referential



Continue?

Terminate?

... engage in **sustained** shared conversations with children to **extend their thinking**





Instrumental

Acknowledge /
repeat

Acknowledge /
repeat

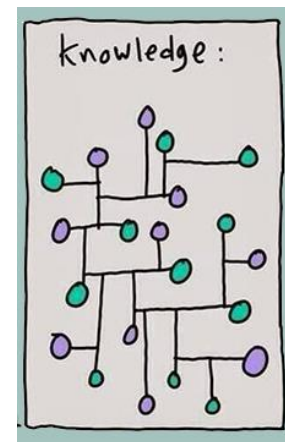
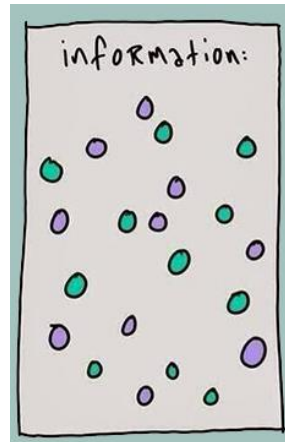
Continue?

Referential

Elaborate /
extend

Elaborate /
extend

Terminate?





Instrumental

Acknowledge /
repeat

Acknowledge /
repeat

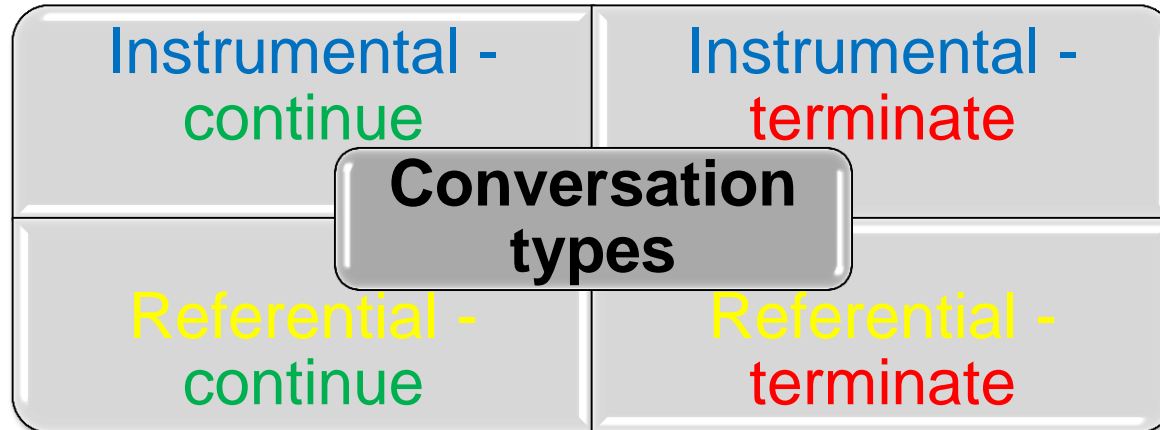
Continue?

Referential

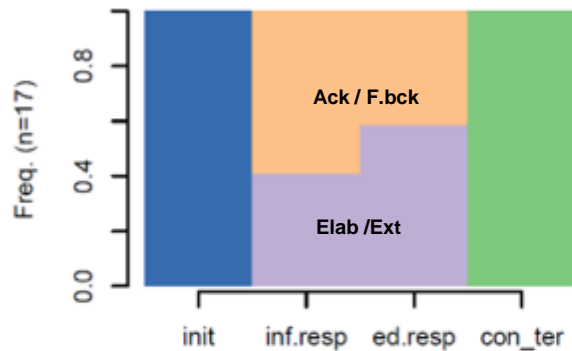
Elaborate /
extend

Elaborate /
extend

Terminate?



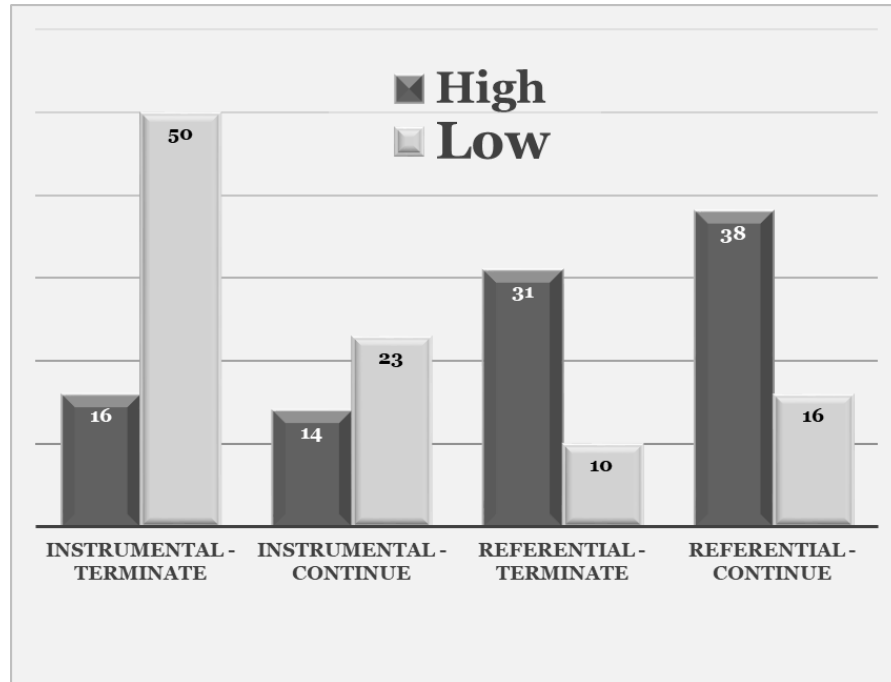
Instrumental - continue

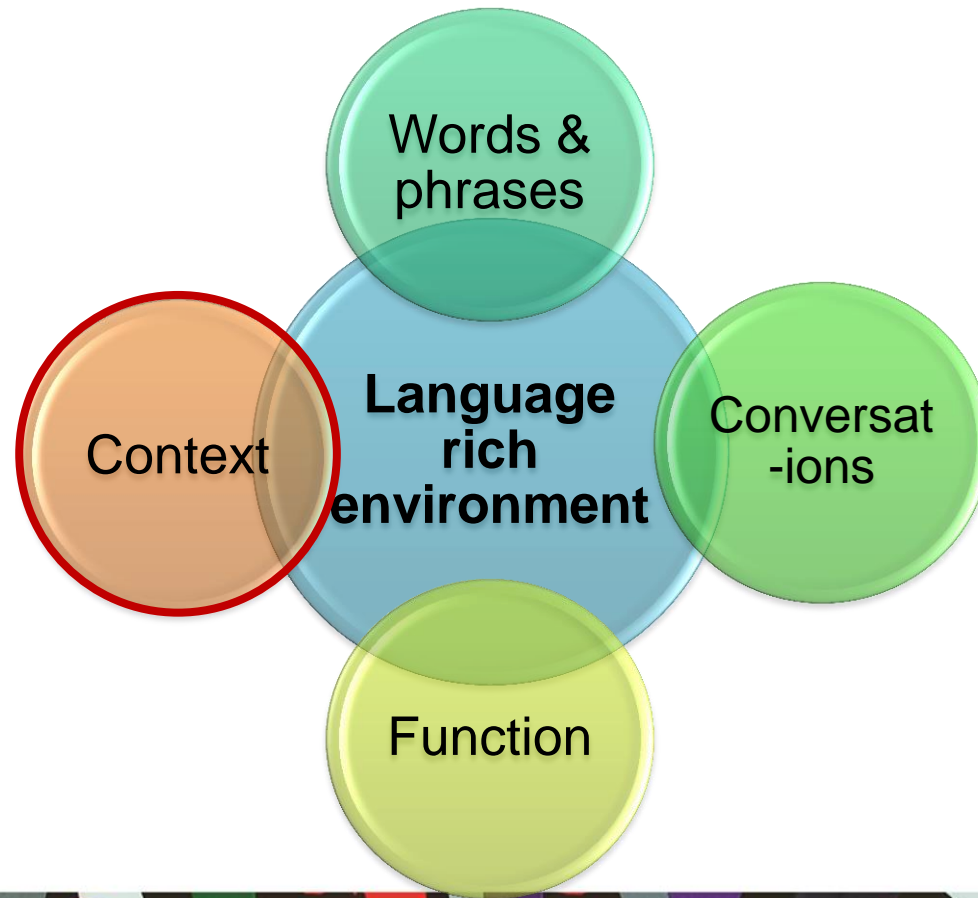


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Did the conversational patterns of high and low word centres differ?





4. Context matters



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“The input to children is not merely a big bag of words but a sequence of small bags of words encountered in time

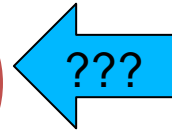
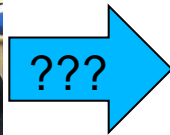
A conversation about breakfast or a trip to the zoo presents the learner not just with different words but different repetitions of words close in time, repetitions we know matter for building a narrative and for learning by the child.”

(Montag, J.L, Jones, M.N., & Smith, L.B. (2018). Quantity and diversity: Simulating early word learning environments. *Cognitive Science*, 42(2), 375-412)



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FROM VISION TO ACTION

Words & ideas during play



Look

Teddy

Ooh/oh

Push

Down

Peek-a-boo

Where's

Box

Nice

Goes

Phone

Pop

Ready

Inside

Gunna

Sheep

Wanna

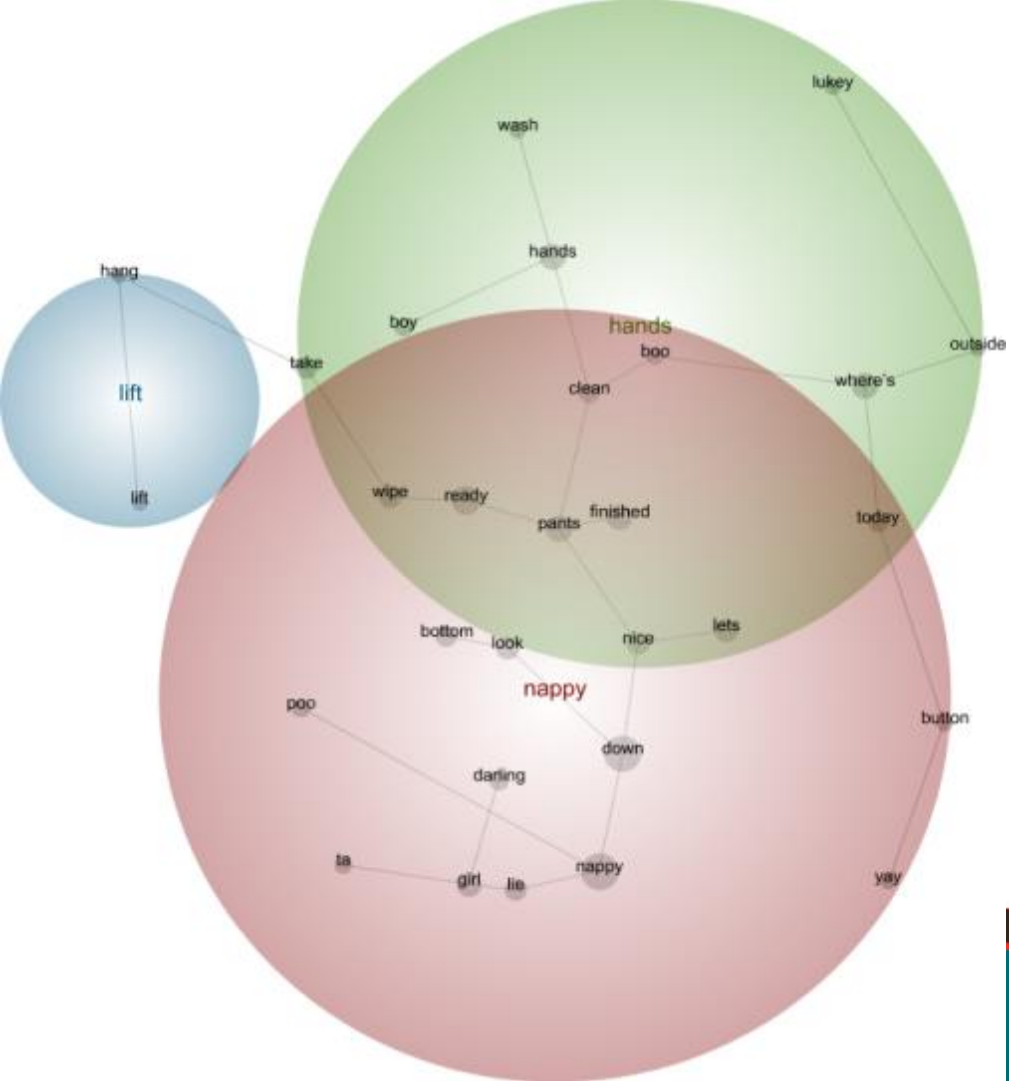
Yellow

Try

Boy

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VISION TO ACTION



Words & ideas during nappy

Where's

Nappy

Nice

Ready

Hands

Ta

Take

Girl

Darling

Look

Pants

Yay

Finished

Boy

Boo

Wipe

Poo

Lie

Clean

Wash

Down

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FROM **VISION** TO **ACTION**

Different contexts, different words, different ideas

Play

Look	Teddy	Ooh/oh
Push	Down	Peek-a-boo
Where's	Box	Nice
Goes	Phone	Pop
Ready	Inside	
Gunna	Sheep	
Wanna	Yellow	
Try	Boy	

Nappy change

Where's	Nappy	Nice
Ready	Hands	Ta
Take	Girl	Darling
Look	Pants	Yay
Finished	Boy	Boo
Wipe	Poo	
Lie	Clean	
Wash	Down	



“... by taking conversations into account we shift from a conceptualization of the input as a big bag of words to a series of little—conversation-sized—bags”



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What about shared reading?

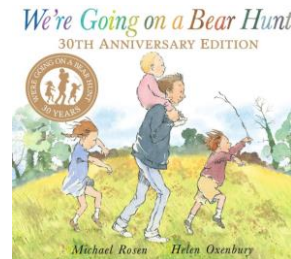
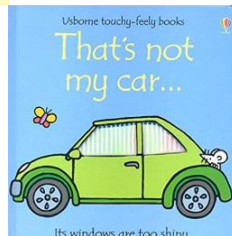
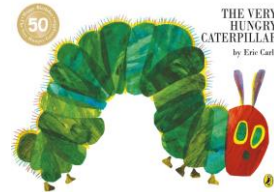
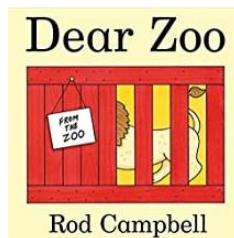


Potential for ...

Vocabulary

Language

Participation



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Conversations constitute situations in which language is linked to content, in which knowledge structures are built and elaborated

Those are the real mechanisms for building better brains.

Snow, C. (2017). The role of vocabulary versus knowledge in children's language learning: a fifty year perspective. *Infancia y Aprendizaje*, 40, 1-18



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Mind what you say

.... a thought not accompanied by words remains in the shadows

Lev Vygotsky



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