Pedagogical scaffolding

Resourcing children’s amazing capacity to learn and uptake language

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KEY POINTS

• A young child’s potential to learn is immense. Meaningful, quality talk-accompanied interaction, and activity by prime caregivers helps a child’s learning to thrive and flourish.

• Language-engaging interactions and activities with children impact on what they know, can say, their vocabulary knowledge and use, their perceptions, and their growing social confidence and capability.

• A child relies on “gifted” incoming “new” language to grow their language potential, alongside trying out their existing repertoire. Getting the balance right is the stimulating challenge.

• Teachers and learning assistants play a major role in enabling each child’s language uptake and learning potential to flourish. This requires mindfulness and focused attention to provide comprehensible “new” potential language learning.
This article considers the important matter of language availability in the lives of babies and children. Without this language availability, knowing, thinking, and expression cannot blossom and mature. It draws on insights gained during a research study of 5–6-year-old children in low socioeconomic schools, designed to explore the impact of language availability on their expressive capabilities. In particular, it focuses on the demonstrable language uptake and learning potential of children as evidenced in the tell and retell assessment used in the study.

Let’s start by thinking about Maria, born today. She arrives ready to learn. She is a person of great potential. How much, when, and what she learns depends on her closest caregivers in the initial days and weeks. In particular, she depends on quality and quantity of talk-accompanied interactions and meaningful exchanges to be her means of “becoming” cognitively—to knowing, perceiving, thinking, and understanding and using language. As Maria’s brain makes more and more neural connections over days, weeks, and months, her cognitive capabilities are shaped, alongside her social, emotional, and physical development and wellbeing.

The notion of quality and quantity of talk-accompanied interactions and actions being the main source of Maria’s cognitive and expressive capability as she grows, is central to her potentialisation. It shapes her intelligence, knowing, and doing. Words are her means to perceive, think, and know. Ribbons of words—language, meaningfully heard and responded to, are her pathways to new understandings and ways of expressing.

The early years of Maria’s life, to a greater or lesser extent at different points in time, are filled with acquisition moments and potential. Her parents, and close family and friends, seem intrinsically to know that her flourishing depends on their input. They practise ZPD (zone of proximal development) without knowing it theoretically. Vygotsky (1896–1934) is an unknown to them in their role as caregivers and significant others in the life of little Maria. However, they are naturally poised to respond inside Maria’s “Goldilock’s zone”—her ZPD or “just right for learning” zone—so she can grow and flourish cognitively, expressively, emotionally, socially, physically, age and stage appropriate.

Now turn the pages of time, and transition with Maria into school. She’s 6 years old and attends her local school. The environmental conditions of her “at school world” are vastly different to what she experienced before going to school. Here she finds herself in the complex world of teaching and learning as enacted pedagogically by her teachers and other potential scaffolders.

The acquisition potential available to Maria (and her peers) is determined and influenced in large part by the availability of skilled scaffolders—her class teacher/s and learning assistants in particular. Maria frequently finds herself struggling within her inner world as she participates in the external contexts she is in. What does and can she make of it all? We might well ask, would she be learning more if there were more Goldilock’s zone language and learning nourishment available to her?

The reality teachers and school-based scaffolders endeavour to address daily is noticing and responding pedagogically as optimally as possible within each child’s Goldilock’s zone (ZPD) throughout their day. Maria’s learning potential depends on it. However, alongside Maria there are another 20 or more other children whose acquisition potential in their Goldilock’s zone can also flourish.

Language availability is of particular importance. “The limits of my language mean the limits of my world” (Wittgenstein, 1933, 5.6). Or, as expressed by Christie and Unsworth (2000), “Language is a primary resource for learning” (p. 222). Tension exists between the number of children in a class and the desire for each child’s language-acquisition uptake potential to flourish.

This article reports on the insights gained about the language-acquisition potential of young learners such as Maria during a tell and retell (explanation in next section) pre- and post-assessment measure. This assessment element gives witness to the significance of “gifting” expressions of concepts, language structures and vocabulary being available to young learners, and the astounding capacity of young minds to uptake and retain.
The research study

In 2013, I conducted a research study with 48 participant 5 and 6 year olds attending ten different schools (decile ratings ranging from 1 to 4), situated in the east, west, central, and south regions of Auckland (van Hees, 2013). The children’s ethnicities and dominant home language/s use reflected the diverse cultural and linguistic landscape of Auckland. The study focus was to examine the outcomes when the children participated in deliberate talk-accompanied, topic-based, teaching and learning actions and interactions at school, experiencing age- and stage-optimising conditions in an intense and deep way. The prime vehicle to open up expressive space was the intensive oral language (IOL) programme and approach (van Hees, 2008). The young learners were involved in one term of IOL contextual learning during which child-engaging contexts of learning were on offer at least 2 or 3 days in a school week, across 8–10 weeks of the term.

Pedagogic scaffolding (Bruner, 1983) in small groups is an integral element in IOL, characterised by two-way interactions and turn-taking in which pathways of talk are determined by all in the group—children and teacher. Conversationally, chains of thinking and knowing are expressed, particularly related to the topic in focus. Each child’s learning is a sociocultural co-construction—self, peers, and adults in collaborative waves of gifting and receiving.

The skill of the teacher in the IOL context is to mediate each child’s scaffolding potential. In groups of 6–8, the children participate in three talk-accompanied extended sessions—1) a hands-on, live component; 2) photo talk leading into the co-construction of “written-like” text, in turn leading to reading; and 3) dialogic story-telling and book interpretation.

An important point about 5- and 6-year-old children and their world of expression and knowing through language, is pointed out by Halliday (2009): “In a written culture, in which education is part of life, children learn to construe their experience in two complementary modes: the dynamic mode of the everyday commonsense grammar and the synoptic mode of the elaborated written grammar” (p. 49). The latter in particular is the linguistic acquisitional challenge that Year 1 and 2 students face.

In my research study, pre- and post-IOL programme data about the children’s language capabilities was collected using the Peabody Picture Vocabulary Test [PPVT] (Dunn & Dunn, 2007), two oral language samples in response to self-selected photos, and two sequential tell-and-retell samples. In particular, the last two were selected to give insights into each child’s synoptic mode of language knowledge and use. Not predicted were the astounding insights that would be revealed about the children’s acquisition uptake potential through the tell and retell measurement.

Details about how the tell and retell assessment was conducted and analysed, follows. It may serve to inform and support teachers to undertake this tell and retell approach themselves.

Tell and retell

The tell and retell contexts were based on two PM Story Books—The Big Kick and Sally’s Beans. Each book text was disassembled and each text page picture glued onto separate cards, with the book print text removed. Tell and retell samples were collected at Time 1—before each child participated in the IOL programme, and at Time 2—after the IOL programme implementation trial of one term. At Time 1 and Time 2 both texts were used so two contrasting book context “tell” opportunities were available.

With each tell and retell the child was scaffolded to understand that they “show their best thinking, looking and telling”. This was modelled for them. The text cards for either The Big Kick or Sally’s Beans were laid out and the child asked to look carefully at each and all, and arrange the pictures in an order that made sense as a story.

How each child sequenced was insightful but not taken as a measure. Many struggled to find a connecting and logical order of pictures and needed assistance. Before going further, the pictures were sequenced as they occurred in the text, the child involved in the sorting. Care was taken to avoid using “telling the story” language.

Assessment steps for tell and retell

Step 1

The child was asked to “tell the story” based on the text pictures in sequence using their “best thinking, looking, and telling”. The child’s existing language resources—mentally and expressively—were being called on, unassisted by any further language scaffolding availability. However, the process was scaffolded so the child would complete the telling from beginning to end.
Step 2

“Tell the story” texts had been prepared for both texts—
*The Big Kick* and *Sally’s Beans*. The original (authored) book texts were not used. The newly prepared tell the story texts were judged to be at the “cutting edge” of 5 and 6 year olds—in their ZPD; comprehensible but probably unlikely to be produced independently. By using these texts, insights into their uptake capability and potential through available modelled language was potentially possible.

This step was a “listen, look, meaning-make, expand” stage. The child was scaffolded to view each text picture and follow the story sequence accompanied by the prepared cutting edge telling (the model). The child was alerted to “focus and notice”, as next the child would be “telling the story again” unaided. As is the reality for all learners, their inner mental activity was a complete unknown. Outward manifestation of internal processing during this notice and focus step was no indicator of what was expressed on second-time telling by the child.

Step 3

Immediately after the model, the child was asked to tell the story again using the child’s “best quality thinking, looking and talking”. The child was prompted to use and include what had just been heard.

Analysis of tell and retell texts

Both child-generated texts (before model and after model) were transcribed and analysed, coding a) before the model for length of utterance, grammaticality, types of utterances, running word count, number of text relevant notions or ideas, grammatical complexity, and fluency, and b) after the model, as for a), but replacing “number of text relevant notions or ideas” with content and language closeness to modelled text.

Case study cohort results

The children in the study

Three case-study children were selected from each class participating in the study—randomly selected from the class cohort based on “best fit” ratings using the CombiList (Damhuis, de Blauw, & Brandenburg, 2004). In-depth IOL impact tracking was on the case-study children only, the lens particularly on the children’s capabilities in English, the classroom language of teaching and learning. Class teachers used overall teacher judgements (OTJs) against 16 CombiList criteria to identify each child’s expressive and interactional responsiveness in class, guided by a rubric to allocate a rating of yes, sometimes, or no for each criteria. An overall “best fit” rating was derived by allocating scores to each rating and calculating the mean score. Thus, in the study were 16 best fit of each of no, sometimes, and yes participant children—a total of 48 children. The range of best fit children is significant when considering the tell and retell data discussed later.

Interim analyses

Full analysis of the research data is currently in progress. However, interim analyses are available. At Time 1, at commencement of the IOL implementation programme, 76% of the children’s texts improved after the text model. Thus, regardless of the potential IOL programme impact, the data at Time 1 revealed their before and after model expressive capabilities shifted significantly. At Time 2, after one term’s IOL implementation providing the children with quality and quantity of talk-accompanied interactions and actions through meaningful and participatory talk and thinking, 88% of the children’s texts improved after the text model.

The shift in expressive text capability by so many children immediately following each tell the story text model reveals their seemingly inbuilt uptake capability. Regardless of the expressive and interactional capability starting points as identified by the CombiList, when provided with the tell the story text model, the majority of the children exhibited varying degrees of acquisition uptake potential as evidenced in their retell texts.

A larger percentage of children improving at Time 2 adds another layer of significance. It suggests that the one-term involvement of the children in language-focused pedagogical scaffolding further enhanced their acquisition potential and capability. Cyclic and sustained uptake potential available to children over time would appear to have a cumulative effect.

In-depth analysis examples

The tell and retell texts of two case-study children—
Mathew and Tolu—serve to illustrate the extent of some children’s inner resources when no scaffolded ZPD language was available. The extent of their acquisition

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uptake potential when the text models (synoptic mode texts) were available under conditions that enhanced noticing and focus, participation and meaning, is notable.

The two students were unique in every way, yet both exhibited strong acquisition uptake potential when a text model was provided. At the start of the study, Mathew, a Year 2 student, was rated best fit yes on the CombiList. Tolu, a Year 1 student in a different school, was rated best fit no. On this basis, Mathew was better resourced expressively and interactionally than Tolu when the study commenced.

Tolu

Let’s begin with Tolu. At Time 1, Tolu was unable to express any ideas or words to tell the story of the sequenced pictures from *The Big Kick*. He struggled and withdrew effort. He chose to say nothing. He was then given the text model and asked to now try and tell the story. Here’s what he expressed:

Dad… and Sam was playing soccer … was playing soccer … in the back yard.
And … And then Dad kicked … the ball high.
And … they … was …
And … he …
They … was … looking … for the soccer ball.
And they they … and they … was … climbing … in the yard.
And Dad … wa— was checking under the flowers.
And Sam was looking under the leaves.
And … they … Dad looked under the leaves.
And Sam was looking under the bushes.
And Sam shouted … “the … soccer ball is on the tree!”
And … Sam said, “I can climb on the tree easy peasy.”
And … Sam got the ball.
And give it to Dad.
Dad said, “… “
And then Dad got the ball.
[Tolu whispering next sentence to himself]
And then Sam jumped off the tree.

Although somewhat laboured in expression, the above text of 117 words indicates Tolu’s amazing capacity to remember and produce. It is quite probable his capability was unknown to his teacher—this capability latent and hidden. He retained a great deal of the modelled word groupings and vocabulary, and sentence forms. His text was detailed and well sequenced.

Six months later, the tell and retell measurement was repeated for post-IOL implementation data gathering. Tolu was able to tell “The Big Kick” confidently, expressing with more detail than “after the model” at Time 1. Over a timespan of 6 months, his Time 1 uptake had been retained to a large extent and he called it to mind when telling the text at Time 2. As at Time 1, he again was given the text model to listen to while following the sequence of pictures, then asked to retell the story. Tolu expressed almost exactly the text model he had just been told. When retelling, he stuttered a little at times as he exerted effort to retrieve text detail, yet he nonetheless spoke with considerable confidence and fluency. Compare his text below to the text model (see Appendix).

Mathew

What would you expect Mathew to be able to “tell” before the model and retrieve after the model, given what you know so far? Bring into the mix the photo-response data-gathering measurement. This was designed to elicit self-generated expression from the child in response to a self-selected photo. As with the tell and retell instructions, the child was scaffolded to know what to do and what was being sought, namely, the child was to try to show his/her “best quality thinking, looking and talking” about what was going on in the photo or talk about ideas that came to mind through the photo.

Here is one of Mathew’s photo responses—a self-selected photo showing young boys playing soccer:

White teams and red team … were. The red team was kicking trying to get the ball off the white team. And he and the white then and the red team is trying to scored. And white team take the ball off the red team. And and the white team kicked the ball. And hh and the white team scored. White team was kicking the ball. And the red team scored. And the yellow teams was trying to … to touch the ball and he tried to throw the ball back. And then and white teams won.

He expressed the above confidently. What stands out for you? Using the analysis elements noted earlier, how did he do? What might you conclude from this text sample about Mathew’s expressive capability?
Mathew struggled to vary content and grammatical structure. He used simple vocabulary and stayed within a literal interpretation of the photo. Relying solely on his inner mental resources, Mathew’s conceptual-language constraints were evident.

In contrast, tell and retell of The Big Kick gave Mathew expressive affordance to fully utilise his acquisition uptake potential. Predictably, his Time 1 “before the model” text mirrored the quality of his photo-response text. His expression was laboured, and structurally and grammatically simple. Following the modelled text, Mathew expressed as follows:

Dad and Sam … was playing … at the back yard … and Dad was … kicking the ball high as he can.
And Dad kicked the ball over Sam’s head.
And Sam … can’t catch the ball … and it went over the fence.
Sam and Dad … was looking for the ball and Sam stand in the box.
And … Dad and Sam was … climbing in the fence and … sit on the fence and … he can’t look for the ball and he … and he climbed down and he’s looking down and he’s can’t find the ball.
Sam … and Dad … looked out in the … grass and … and Dad and Son, Sam moved the … grass and there’s no ball in there.
And … Sam said to his dad, “I can see the ball, Dad.”
And … Dad lift … him up … and … Sam said, “I can climb easy and I can … get the ball … down.”
And … Sam … kicked the ball down and Dad caught the ball and then Dad said, “you are good climbing”

This text expressed by Mathew was close to the text model and included the variety of sentence forms he had heard. Mathew retrieved most of the higher level vocabulary in the text model and expressed the story sequence confidently.

Six months later, as with Tolu, his “before the model” telling gave evidence to long-term retention of his acquisition uptake potential. His potential to learn and retain had transformed his inner mental resources so that without the text model reheard, he was able to express a text close to the model. Following the text model reheard at Time 2, his enhanced language resources and sharpened acquisition alertness resulted in an “after the model” retell fully using the synoptic mode expression of the model text.

Implications and connections

The above glimpse into children’s acquisition potential in the context of classroom extracted from the study complements what we know about the acquisition uptake potential of children in their early years. Maria thrived and flourished during her preschool years because her whānau—parents and close family members especially, provided her with expressive space and opportunities, alongside multiple models of language to express meanings.

So it is with children in classroom settings. They too similarly thrive and flourish when provided with these same optimising conditions of learning and expression. Goldilock’s zone (ZPD) expressions of meaning, tried out and meaningfully engaged with by each and all children, will grow and flourish them cognitively and expressively (Vygotsky, 1934/1962; Wertsch, 1998). Conversely, they will struggle and remain under-potentialised when not made available to them.

The mastery of more sophisticated or proficient grammar and use of language is protracted and complex, the child gradually increasing his/her linguistic range. Children need to “learn how to tap into the full repertoire of expressive options available to them” (Berman, 2004, p. 11). To enable children towards greater synoptic mode capability in school contexts and texts requires intentionality, without which children may never flourish their full potential as meaning-makers and language users.

My research study suggests children have deep and extensive acquisition uptake potential. This is supported by expanding neuroscience insights into the brain architecture of children’s brains—in particular, growing understandings about the frontal, temporal, and parietal lobes of the brain where memory, speech and language plays out an intricate interlinking network (e.g., Hutton et al., 2015). However, as yet we know very little indeed about this most complex organ, the human brain. What is becoming clear is that from birth, babies rely on outside sources and resources to stimulate the firing and wiring of these parts of the brain so their potential to learn is actualised.

Final thoughts

Finally, what better than to dwell on the wisdoms and insights of world-recognised sociolinguists and a local new entrant/Year 1 teacher.

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 (Halliday, 1993, p. 93.)

A child moves through three phases in learning language, according to Halliday (2003). At the earliest stage a child makes meaning through a protolanguage, followed by a lexico-grammatical phase shaped by increasing access to and demand for extended, more complex meaning exchanges, gradually moving into an ongoing phase of grammatical complexification.

As the child moves into the schooling environment, the teacher becomes “in loco parentis” and “language development has now become the object of conscious
Cumulative acquisition of more complex grammatical structures and vocabulary by the child through “innumerable small (meaning-making) moment(s)” (p. 319) depends on their availability under noticing and participatory conditions. The text model retell is one such example.

The third aspect, learning about language, is when the child consciously notices, enquires about and is assisted to explore vocabulary and grammatical use and possibilities. These three phases of language development are more or less optimised as the result of the child’s own capacity to understand and use the quality and quantity of words he/she hears and engages with.

A study of very young children between the ages of 2–3 years by Valian and Casey (2003) suggested that plentiful and frequent “input”—(available language) increases the chances that the child “collects” data. “By raising a child’s awareness of what they are saying and how they are saying it, and coming up with more (appropriate or effective) ways of saying that thing” (van Lier, 2004, p. 90), their acquisition potential is raised.

It is both exciting and challenging to realise how much the growth of children’s inbuilt language-acquisition uptake potential depends on prime scaffolders in their daily lives. Teachers and learning assistants are significant prime scaffolders. When they pay attention to the why, how and what of Goldilock’s zone (ZPD) language availability when engaging with children, as in the tell and retell research study example, they are potentialising a child’s capacity to learn language, learn about language, and learn through language.

About her class of 16 new entrant 5 year olds, a local teacher described the children she teaches as “young geniuses”:

“Teachers and learning assistants are significant prime scaffolders. When they pay attention to the why, how and what of Goldilock’s zone (ZPD) language availability when engaging with children, as in the ‘tell and retell’ research study example, they are potentialising a child’s capacity to learn language, learn about language, and learn through language.”

Children are like sponges and they are so creative with it. ‘Feed in’ and it becomes something much more than was available from me. Children are linguistic geniuses, relying on us to nourish their unique pathways of thinking, doing and saying’ (K. Rooney, personal communication, April 15, 2018).

The research study described in this article offered a glimpse into 48 young linguistic geniuses nourished by talk-accompanied interaction and action.

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References


van Hees, J. (2011). *Oral expression of five and six year olds in low-socio economic schools*. The University of Auckland. ResearchSpace@Auckland

**Appendix**


**The big kick**

Dad and Sam were playing soccer in the backyard. Dad kicked the ball really high. It went over Sam’s head and over the fence.

Sam and Dad looked over the fence to see if they could see the ball. Sam had to stand on a box to see.

They decided to climb over the fence and try to find the ball. They couldn’t see it from the top of the fence.

Dad said, ‘We’ll jump over and look in the bushes.’ Dad looked among the flowers. Sam looked under the leaves.

Dad and Sam kept looking and looking on the ground but they couldn’t see the ball.

Suddenly Sam shouted, ‘I see the ball Dad. It’s stuck in the tree. See.’

‘Oh yes,’ said Dad. ‘There it is. How will we get it down?’

Sam said, ‘I can climb up the tree and get it. Easy peasy!’

So Sam did. He climbed up while Dad watched to make sure he was safe.

At last Sam got hold of the ball and threw it down to Dad.

‘Well done son,’ said Dad. ‘You are clever. We can keep on playing now.’

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