Supplemental Material S2. Individual variation, late-talking children who did not reach typical expressive vocabulary range, and receptive ability within the late-talking sample.

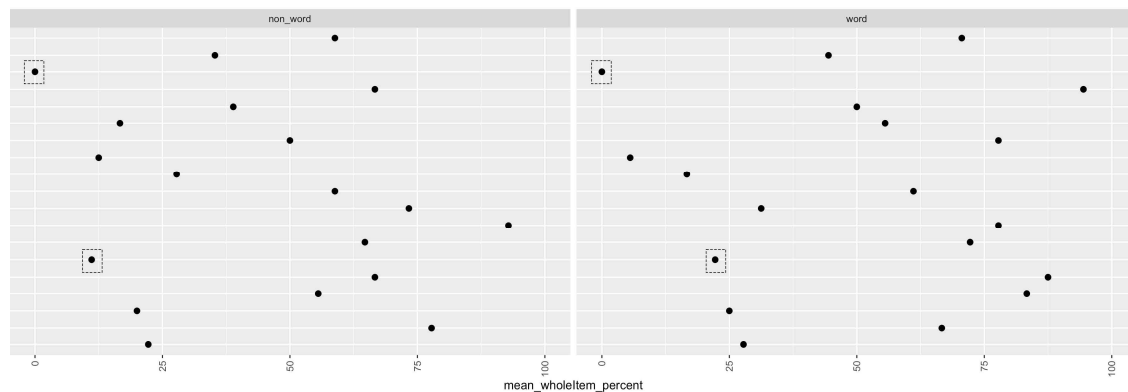## Late-talking children who did not reach typical expressive range

Two late-talking children did not reach the typical range of vocabulary for their age when tested at T2. One child developed intermittent otitis media between T2 and T3 which self-resolved without intervention. This child did not have a history of hearing difficulties or any symptoms of otitis media at T1 or T2. This child was tested on the PSRep Test and fast mapping at T2, but was not tested on CSWL at T3. This child reached the 30th percentile for their age range of expressive vocabulary at T3. The other child was noted by the experimenter to have developed the appearance of an overjet between T2 and T3 (malocclusion of the teeth where the upper jaw protrudes over the lower jaw, not typically operated on under the age of 12 years, which may have impacted their speech). This child was tested on all three tasks. This child reached the 13th percentile for their age range of expressive vocabulary at T3. Both families were aware of their child's difficulties at T1.

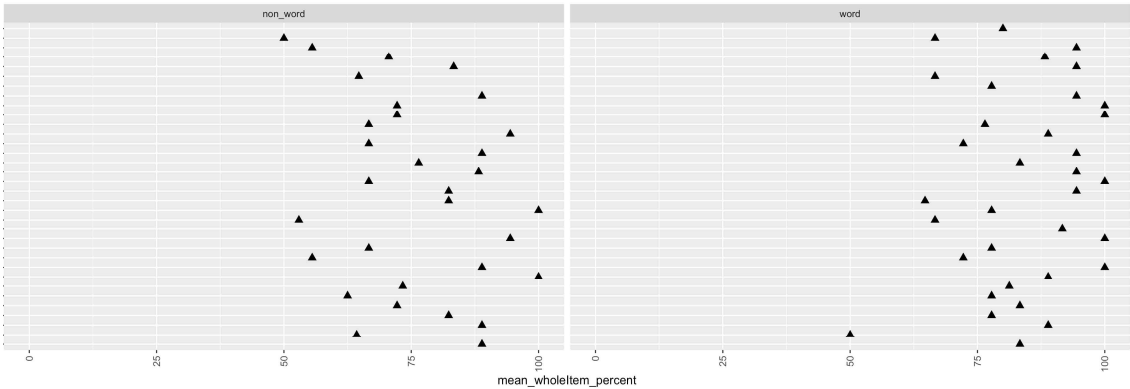## Individual variation in task performance within the study sample

The following Figures (S1–S4) show the individual variation within the sample per task, including the performance of children who did not reach typical levels of expressive vocabulary size at the time of testing. For each Figure, Panel A shows LT children (circle); Panel B shows TD children (triangle).

Figure S1. Nonword repetition: mean item correct per participant (percent). Each point represents a single participant.

S1A: Late-talking children (circle). ▣ denotes the response of children who had not reached typical levels of expressive vocabulary at time of task (T2).
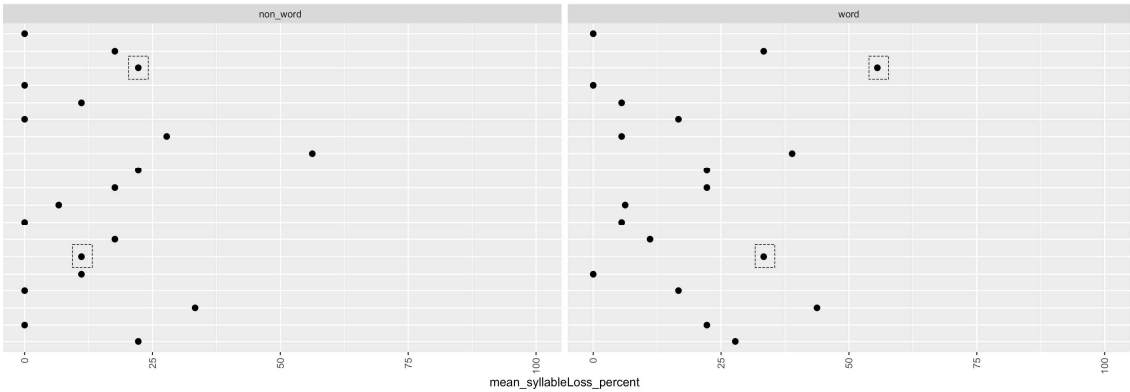
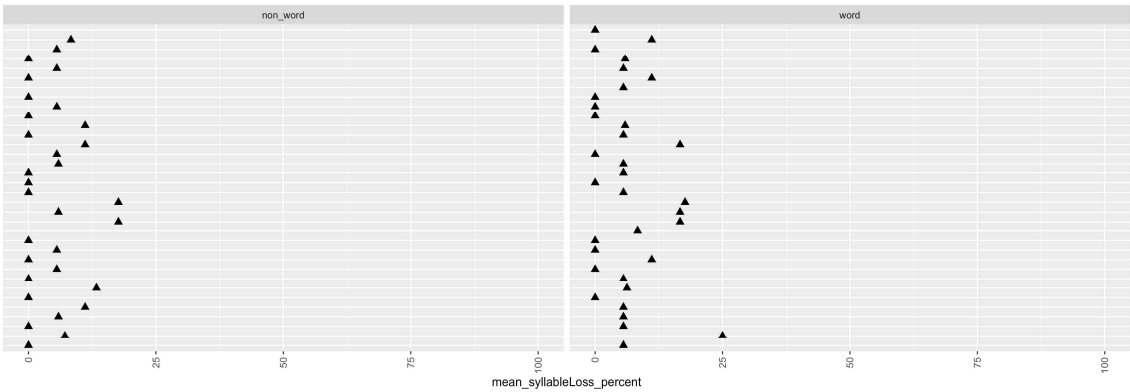**S1B:** Typically developing children (triangle)

Figure S2. Nonword repetition: mean syllable loss per participant (percent). Each point represents a single participant.

S2A: Late-talking children (circle). ⊡ denotes the response of children who had not reached typical levels of expressive vocabulary at time of task (T2).
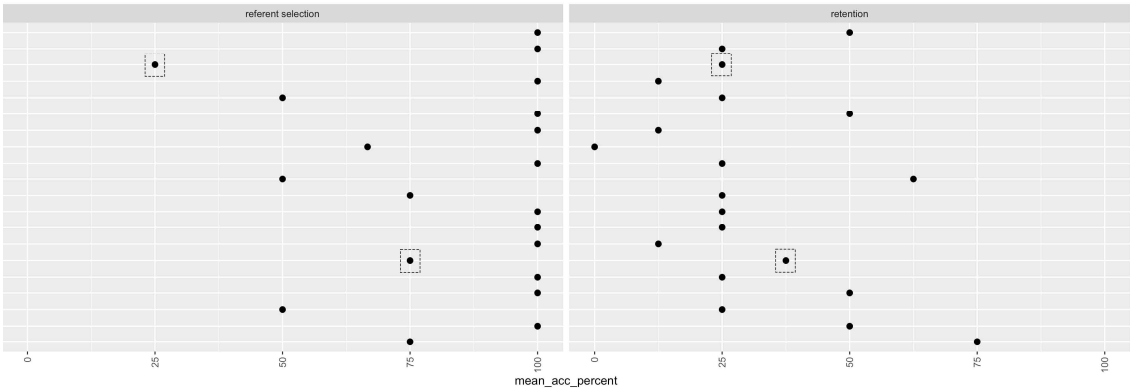

S2B: Typically developing children (triangle).

Figure S3. Fast mapping: mean accuracy per participant (percent). Each point represents a single participant.

S3A: Late-talking children (circle). ▣ denotes the response of children who had not reached typical levels of expressive vocabulary at time of task (T2).

S3B: Typically developing children (triangle).

Figure S4. Cross-situational word learning: mean accuracy per participant (percent). Each point represents a single participant.

S4A: Late-talking children ▣ denotes the response of children who had not reached typical levels of expressive vocabulary at time of task (T3).

S4B: Typically developing children.

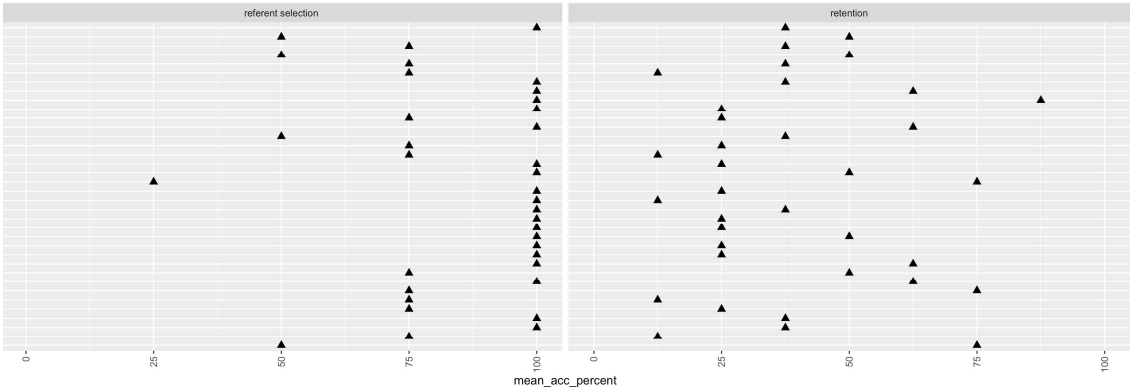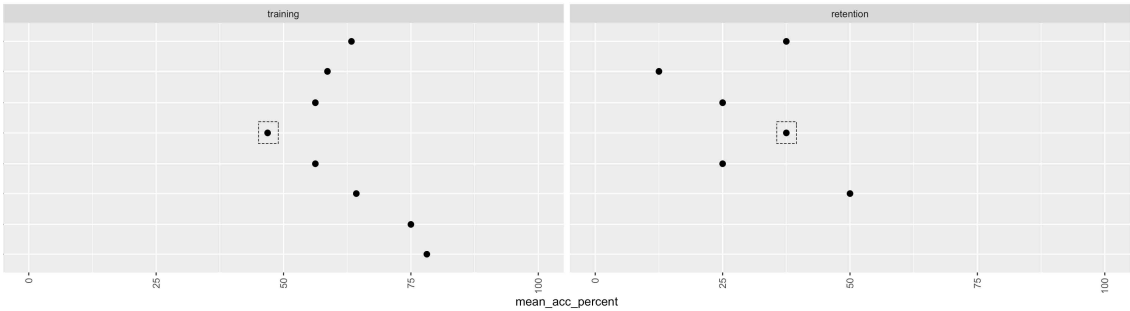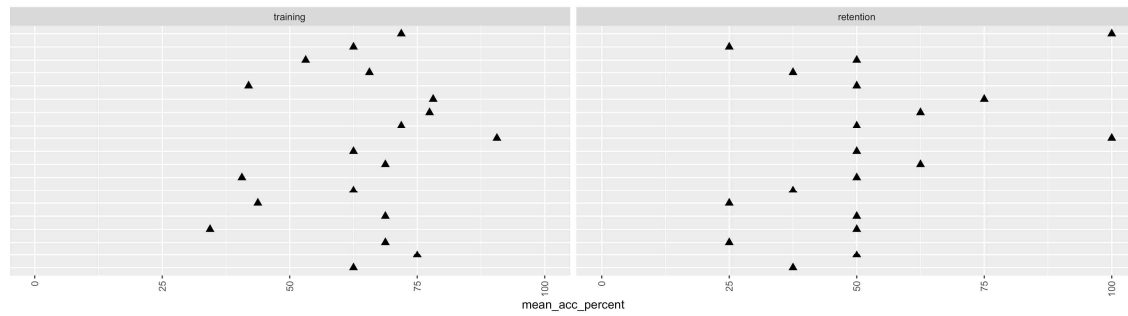## Receptive and expressive vocabulary deficits within the late-talking (LT) sample

A number of LT children had low receptive vocabulary for their age range ($\leq 10^{th}$ percentile, Oxford-CDI) at T1 (age 2;0–2;5-years-old). Table S1 provides sample information on LT children at T1 with mixed receptive and expressive deficits, and those with expressive deficits only. The two groups did not differ on other sample measures beyond receptive vocabulary (Table S1).

Table S1. Sample information for LT children with mixed receptive-expressive deficits, and expressive deficits only.

	Mean (*SD*)		Welch's two-sample t-test		
	Mixed LT *(n = 12)*	*Expressive LT* *(n = 9)*	*t-value (df)*	*p-value*	*Cohen's d*
Age (years; months)	2;3 (0;1)	2;2 (0;1)	—	—	—
Sex (m : f)	9 : 3	5 : 4	—	—	—
T1 CDI receptive [a]	200.58 (78.93)	334.33 (41.87)	5.01 (17.43)	< .001	2.12
T1 CDI expressive [a]	68.58 (53.38)	48.67 (44.30)	–0.93 (18.74)	.363	–0.41
T2 ROWPVT-4	108.91 (8.13)	108.22 (12.75)	–0.13 (13.77)	.900	–0.06
T2 EOWPVT-4	106.45 (15.85)	109.33 (11.54)	0.19 (17.87)	.855	0.08
	Mixed LT *(n = 5)*	*Expressive LT* *(n = 4)*			
T3 Non-verbal IQ (Leiter-3)	92.60 (16.29)	91.25 (9.07)	–0.16 (6.42)	.880	–0.10
	Mixed LT *(n = 9)*	*Expressive LT* *(n = 9)*			
T4 Vineland ABC [b]	95.60 (9.40)	95.80 (4.66)	0.06 (11.71)	.950	0.03
T4 Vineland Com	98.60 (14.20)	110.00 (32.50)	1.01 (10.91)	.336	0.47

T4 Vineland DLS	93.00 (8.20)	97.30 (7.23)	1.19 (15.75)	.252	0.56
T4 Vineland Soc	94.30 (9.53)	92.40 (6.75)	–0.49 (14.41)	.635	–0.23
T4 Vineland Mot	97.20 (11.80)	95.70 (6.18)	–0.35 (12.08)	.732	–0.17
T4 Vineland MB [a]	6.67 (4.92)	7.33 (3.81)	0.32 (15.05)	.752	0.15

NB: unless otherwise specified, standardised scores were used.

ABC = Adaptive Behaviour Composite; Com = Communication subscale; DLS = Daily Living Score subscale; MB = Maladaptive Behaviour subscale; Mot = Motor subscale; LT = late-talking; PSRep = Preschool Repetition; Soc = Socialisation subscale; TD = typically developing; vocab = vocabulary

[a] *Raw scores used*

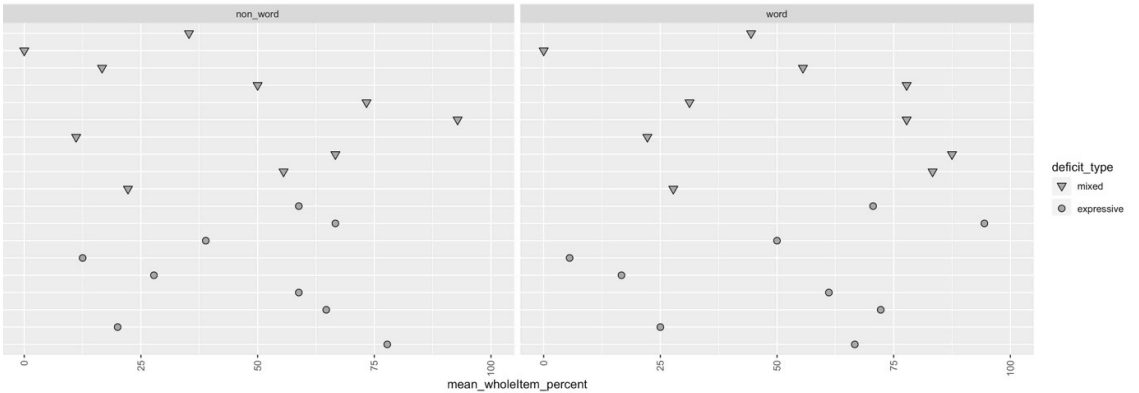[b] *This is a composite of Communication, Daily Living Skills, and Socialisation subscales*

Individual variation in task performance within the late-talking sample

Tables S2 – S4 provides descriptive statistics per task and Figures S5–S7 show the individual variation regarding task performance for LT children with mixed receptive-expressive deficits, and those with expressive deficits only.

Table S2. Nonword repetition: Descriptive statistics for late-talking children by mixed expressive-receptive or expressive-only deficits at T1.

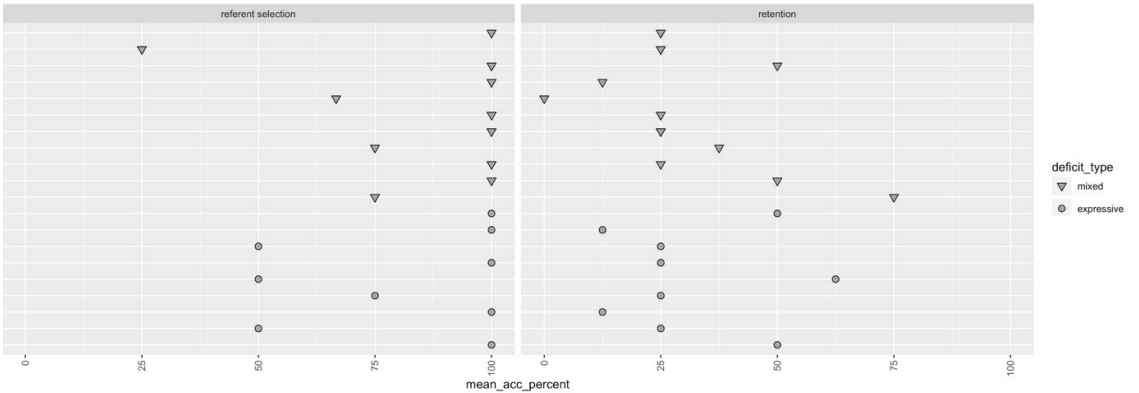| Late-talking population	**Nonwords**			
	One-tailed t-test against chance (50%)			
	Mean accuracy (SE)	*t-value (df)*	*p-value*	*Cohen's d*
Mixed expressive-receptive (*n* = 10)	0.41 (0.04)	–0.80 (9)	.777	–0.12
Expressive-only (*n* = 9)	0.48 (0.04)	–0.35 (8)	.631	–0.25
	Words			
	One-tailed t-test against chance (50%)			
	Mean accuracy (SE)	*t-value (df)*	*p-value*	*Cohen's d*
Mixed expressive-receptive (*n* = 10)	0.51 (0.04)	0.08 (9)	.469	0.03
Expressive-only (*n* = 9)	0.52 (0.04)	0.14 (8)	.447	0.05

Figure S5. Nonword repetition: mean accuracy (percent) per late-talking participant, separated by mixed expressive-receptive (indicated by inverse triangle) and expressive-only deficits (indicated by circle). Each point represents a single participant.

Table S3. Fast-mapping: descriptive statistics for late-talking children by mixed expressive-receptive or expressive-only deficits at T1.

Late-talking population	Referent selection trials			
	One-tailed t-test against chance (33%)			
	Mean accuracy (SE)	*t-value (df)*	*p-value*	*Cohen's d*
Mixed expressive-receptive (*n* = 11)	0.86 (0.05)	7.30 (10)	< .001	2.20
Expressive-only (*n* = 9)	0.81 (0.07)	5.87 (8)	< .001	1.96
	Retention trials			
	One-tailed t-test against chance (33%)			
	Mean accuracy (SE)	*t-value (df)*	*p-value*	*Cohen's d*
Mixed expressive-receptive (*n* = 11)	0.34 (0.05)	–0.19 (10)	.574	–0.06
Expressive-only (*n* = 9)	0.32 (0.06)	–0.18 (8)	.568	–0.06

Figure S6. Fast-mapping: mean accuracy (percent) per late-talking participant, separated by mixed expressive-receptive (indicated by inverse triangle) and expressive-only deficits (indicated by circle). Each point represents a single participant.

Table S4. Cross-situational word learning: descriptive statistics for late-talking children by mixed expressive-receptive or expressive-only deficits at T1.

Late-talking population	Training trials			
	One-tailed t-test against chance (50%)			
	Mean accuracy (SE)	*t-value (df)*	*p-value*	*Cohen's d*
Mixed expressive-receptive (*n* = 5)	0.61 (0.04)	2.10 (4)	.052	0.94
Expressive-only (*n* = 3)	0.65 (0.05)	2.72 (2)	.056	1.57
	Retention trials			
	One-tailed t-test against chance (33%)			
	Mean accuracy (SE)	*t-value (df)*	*p-value*	*Cohen's d*
Mixed expressive-receptive (*n* = 4)	0.31 (0.08)	0.31 (3)	.579	–0.11
Expressive-only (*n* = 2)	0.31 (0.12)	–0.28 (1)	.587	–0.20

Figure S7. Cross-situational word learning: mean accuracy (percent) per late-talking participant, separated by mixed expressive-receptive (indicated by inverse triangle) and expressive-only deficits (indicated by circle). Each point represents a single participant.