Supplemental Materials

Statistical Analyses

Table S1

Fixed Effects for the Nonverbal IQ Factor in the GLMMs for Naming, Recognition, Identification, and Description

Outcome measure	F	Degrees of freedom	p	*partial η^2*
Naming	0.15	1, 407	.698	< 0.01
Recognition	1.73	1, 407	.190	0.004
Identification	5.71	1, 407	.017*	0.01
Description	0.40	1, 407	.525	< 0.01

Note. Nonverbal IQ assessed using the Primary Test of Nonverbal Intelligence (PTONI; Ehrler & McGhee, 2008).

*p < .05

Table S2

Group Comparisons on Naming, Recognition, Identification, and Description Across the Four-day Protocol

Measure	Day 1 (encoding)			Day 2 (re-encoding)			Day 3 (re-encoding)			Day 4 (retention)		
	t	*p*	95% CI	*t*	*p*	95% CI	*t*	*p*	95% CI	*t*	*p*	95% CI
Naming	-6.77	< .001	-32.85, -18.07	-7.48	< .001	-35.31, -20.62	-5.64	< .001	-28.65, -13.85	-0.34	.732	-8.58, 6.03
Adjusted	-8.68	.044	-17.11, -0.24	-13.68	.002	-22.42, -4.94	-6.47	.103	-14.27, 1.32	7.20	.163	-2.94, 17.34
Recognition	-6.97	< .001	-19.41, -10.87	-8.53	< .001	-22.41, -14.02	-6.64	< .001	-20.59, -11.18	-6.87	< .001	-24.25, -13.46
Adjusted	-8.32	.002	-13.68, -2.96	-11.19	< .001	-15.77, -6.61	-8.86	.003	-14.78, -2.94	-10.99	.001	-17.63, -4.36
Identification	-1.77	.078	-8.34, 0.43	-1.37	.172	-4.86, 0.87	-0.33	.741	-2.62, 1.86	-1.61	.107	-17.58, 1.73
Adjusted	-4.09	.102	-9.00, 0.82	-1.75	.362	-5.52, 2.02	-0.06	.971	-3.33, 3.45	-0.89	.900	-14.83, 13.04
Description	-3.40	.001	-16.41, -4.37	-3.17	.002	-15.00, -3.50	-3.94	< .001	-15.06, -5.03	-	-	-
Adjusted	-7.38	.047	-14.67, -0.09	-6.13	.074	-12.86, 0.60	-5.39	.318	-12.52, 1.75	-	-	-

Note. Group comparisons are for the DLD to TD groups. Least significant difference contrasts are reported. 95% CI = 95% confidence interval (upper, lower). All values indicate percentage of accuracy on the tasks. 'Adjusted values' are from the second set of GLMM analyses (controlling for nonverbal IQ and verbal working memory).

Table S3

Comparisons Between Each Time Point on Naming, Recognition, Identification, and Description, Disaggregated by Group

	DLD						TD					
	t	t adjusted	p	p adjusted	95% CI	95% CI adjusted	t	t adjusted	p	p adjusted	95% CI	95% CI adjusted
Naming												
Day 1–Day 2	-3.03	-5.24	.003	.150	-11.82, -2.51	-12.36, 1.89	-5.23	-10.24	< .001	.001	-13.31, -6.04	-16.10, -4.38
Day 2–Day 3	-3.97	-12.10	< .001	< .001	-15.73, -5.31	-19.03, 5.18	-2.39	-4.90	.017	.032	-6.94, -0.67	-9.36, -0.44
Day 3–Day 4	9.35	38.99	< .001	< .001	25.72, 39.41	29.42, 48.56	20.34	52.66	< .001	< .001	47.46, 57.62	43.20, 62.12
Recognition												
Day 1–Day 2	-1.47	-3.55	.142	.053	-5.39, 0.78	-7.15, 0.05	-5.78	-6.41	< .001	< .001	-7.21, -3.55	-9.80, -3.03
Day 2–Day 3	-3.43	-5.55	.001	.006	-7.58, -2.06	-9.48, -1.62	-3.81	-3.22	< .001	.001	-3.77, -1.21	-5.17, -1.27
Day 3–Day 4	4.45	5.74	< .001	.009	3.60, 9.29	1.44, 10.04	4.48	3.61	< .001	.010	1.95, 5.00	0.86, 6.36
Identification												
Day 1–Day 2	-0.89	-2.00	.376	.294	-5.07, 1.92	-5.74, 1.74	0.24	0.34	.808	.855	-1.64, 2.11	-3.33, 4.02
Day 2–Day 3	-1.72	-2.57	.087	.095	-4.57, 0.31	-5.58, 0.45	-0.61	-0.76	.542	.694	-2.16, 1.14	-4.53, 3.02
Day 3–Day 4	13.58	51.90	< .001	< .001	46.61, 62.38	40.82, 62.98	15.13	15.94	< .001	< .001	40.85, 53.05	41.18, 60.70
Description												
Day 1–Day 2	-0.17	-2.60	.865	.282	-4.17, 3.51	-7.33, 2.14	0.52	-1.34	.605	.580	-3.89, 2.27	-6.11, 3.43
Day 2–Day 3	-1.99	-3.85	.047	.132	-9.47, 1.06	-8.86, 1.17	-3.06	-3.10	.002	.213	-7.67, -1.67	-7.99, 1.79

Note. Least significant difference contrasts are reported. 95% CI = 95% confidence interval (upper, lower). All values indicate percentage of accuracy on the tasks. 'Adjusted values' are from the second set of GLMM analyses (controlling for nonverbal IQ and verbal working memory).

Table S4

Confidence Intervals (95%; Upper, Lower) Indicating Between-Group Differences on Naming

	DLDlow	DLDav	TDlow	TDav
Day 1	41.06, 49.67	56.61, 65.52	49.89, 73.71	62.59, 76.34
Day 2	48.62, 57.76	60.02, 72.58	61.80, 82.53	73.98, 85.44
Day 3	57.97, 68.37	73.05, 83.76	68.67, 88.62	79.29, 89.93
Day 4	27.65, 37.98	31.81, 47.02	13.04, 38.57	25.73, 38.17

Note. DLDlow = estimated values for children with DLD and low verbal working memory; DLDav = estimated values for children with DLD and average verbal working memory; TDlow = estimated values for typically developing children with low verbal working memory; TDav = estimated values for typically developing children with average verbal working memory.

Table S5

Confidence Intervals (95%; Upper, Lower) Indicating Between-Group Differences on Recognition

	DLDlow	DLDav	TDlow	TDav
Day 1	67.37, 73.04	74.71, 81.31	75.66, 90.70	82.65, 90.40
Day 2	69.79, 76.38	77.19, 84.93	86.44, 95.73	90.41, 95.47
Day 3	73.78, 80.52	81.52, 92.36	92.20, 98.54	94.47, 97.85
Day 4	66.46, 75.47	74.81, 86.92	86.32, 96.80	89.74, 95.36

Note. DLDlow = estimated values for children with DLD and low verbal working memory; DLDav = estimated values for children with DLD and average verbal working memory; TDlow = estimated values for typically developing children with low verbal working memory; TDav = estimated values for typically developing children with average verbal working memory.