

Supplemental Material S5. Overlap-based metrics and effect size metrics for rate of symbolic communication.

Participant	NAP Metric				WC-SMD			Number of demonstrations		Functional relation
	NAP	SE	95% CI	Magnitude	WC-SMD	SE	95% CI	Demonstration	Actual/potential	
Tate									0/4	NO
Tier 1	.45*	1.41	[0.20–0.74]	No effect	0.19	0.52	[–0.83–1.21]			
Tier 2	—	—	—	—	—	—	—			
Tier 3	.41*	0.19	[0.19–0.69]	No effect	–0.32	0.42	[–1.134–0.50]			
Tier 4	.56*	0.19	[0.26–0.81]	No effect	0.11	0.38	[–0.63–0.84]			
Lennox									4/4	YES
Tier 1	1.00*	0.00	[1.00–1.00]	Large	1.47*	0.62	[0.24–2.68]	X		
Tier 2	1.00*	0.00	[1.00–1.00]	Large	2.37*	0.80	[0.80–3.93]	X		
Tier 3	1.00*	0.00	[1.00–1.00]	Large	2.21*	0.58	[1.07–3.35]	X		
Tier 4	.93*	0.06	[0.64–0.99]	Medium	1.96*	0.75	[0.49–3.42]	X		
Paul										
Tier 1	1.00*	0.00	[1.00–1.00]	Large	3.61*	1.21	[1.24–5.97]	X	4/4	YES
Tier 2	.92*	0.07	[0.66–0.99]	Small	1.53*	0.57	[0.41–2.65]	X		
Tier 3	.98*	0.02	[0.78–0.99]	Large	2.69*	0.71	[1.31–4.07]	X		
Tier 4	1.00*	0.00	[1.00–1.00]	Large	2.78*	0.66	[1.48–4.07]	X		
Sasha										
Tier 1	1.00*	0.00	[1.00–1.00]	Large	1.83*	0.61	[0.64–3.03]	X	4/4	YES
Tier 2	.92*	0.09	[0.53–0.99]	Small	2.73*	1.25	[0.29–5.18]	X		
Tier 3	.74*	0.18	[0.41–0.92]	Small	0.31	0.40	[–0.47–1.10]	X		
Tier 4	.96*	0.04	[0.73–1.00]	Medium	2.02*	0.67	[0.88–3.52]	X		

Note. CI = confidence interval; NAP = nonoverlap of all pairs (Parker & Vannest, 2009); WC-SMD = within-case standard mean difference; *SE* = standard error. Criteria for NAP estimates for no effect, small effect, and large effect were based on Peterson-Brown, Karich, and Symons (2012). No effect $\leq .50$; small = .51–.93; medium = .93–.96; large $\geq .96$. *Significant estimate, as 95% confidence interval does not include zero.

References

- Parker, R. I., & Vannest, K. (2009). An improved effect size for single-case research: Nonoverlap of all pairs. *Behavior Therapy*, 40, 357–363. <https://doi.org/10.1016/j.beth.2008.10.006>
- Petersen-Brown, S., Karich, A. C., & Symons, F. J. (2012). Examining estimates of effect using non-overlap of all pairs in multiple baseline studies of academic intervention. *Journal of Behavioral Education*, 21, 203–216. <https://doi.org/10.1007/s10864-012-9154-0>