

Supporting Information for: Lammertink, I., Boersma, P., Wijnen, F., & Rispens, J. Children with Developmental Language Disorder have an auditory verbal statistical learning deficit: Evidence from an online measure. Article accepted in *Language Learning* on 11 June 2019.

Appendix S1: Operationalization of Contrasts

Operationalization of the sum-to-zero contrast in the linear mixed effects model (online measure) and generalized linear mixed effects model (offline measure).

Predictor	Sum-to-zero contrasts	Operationalization
Online measure		
Intercept		Average normalized RT
Disruption peak (1 st contrast of Block)	Disruption Block: +2/3 Third training block: - 1/3 Recovery block: -1/3	Difference in normalized RT between items in disruption block and combined third training block and recovery block.
PrePostDisruption (2 nd contrast of Block)	Disruption Block: 0 Third training block: - 1/2 Recovery block: +1/2	Difference in normalized RT between items in third training block and recovery block.
Targetness	NonTarget: - 1/2 Target: + 1/2	Difference in normalized RTs for nontargets versus targets.
ExpVersion	Version 1: - 1/2 Version 2: + 1/2	Difference in normalized RTs for items in experiment version 1 versus experiment version 2.
Group	DLD: -1/2 TD: +1/2	Are the normalized RTs of children with TD faster than the normalized RTs of children with DLD?

Offline measure

Intercept		Yes bias: difference in odds ratio between children's yes-responses and children's no-responses.
Rule	NAD-rule: +1/2 Violation rule: -1/2	Difference in odds ratio between children's endorsement rate for items that follow the rule (NAD-rule) and items that violate the rule (Violation-rule).
Generalization	Familiar: +1/2 Novel: -1/2	Difference in odds ratio between children's endorsement rate for items with familiar x-elements and items with novel x-elements.
ExpVersion	Version 1: -1/2 Version 2: +1/2	Difference in odds ratio between children's endorsement rate in experiment version 1 and experiment version 2.
Group	DLD: -1/2 TD: +1/2	Difference in odds ratio between the endorsement rate in children with DLD and TD children.
