

Supplemental Material S5. Effect sizes for high quality interventions for each language examined.

CEC Group	Domain	Intervention Name	Evidence Level	Group	Mean Effect Sizes [†]	Community Language Effect Sizes	Home Language Effect Sizes	Community/Home Language Effect Sizes
EBP	Early Literacy	Nuestros Niños ^{2, 3}	Ib	At Risk	$d^b = 0.32$	$d^b = 0.10$	$d^b = 0.54$	-
Potentially EBP	Receptive Vocabulary	Literacy Express Preschool Curriculum: Bilingual ⁴	Ib	At Risk	$d^b = 0.55$	$d^b = 0.56$	$d^b = 0.53$	-
		Shared Storybook Reading ⁸	Ib	At Risk	$\eta^2 = 0.85$	$\eta^2 = 0.85$	-	-
		Words of Oral Reading and Language Development ⁹	Ib	At Risk	$d^b = 0.71$	$d^b = 0.71$	-	-
	Expressive Vocabulary	Focused Stimulation Approach: Monolingual ¹³	Ib	DLD	$d^a = 0.78$	$d^a = 0.78$	-	-
		Focused Stimulation Approach: Bilingual ¹³	Ib	DLD	$d^a = 0.49$	$d^a = 0.49$	-	-
		Literacy Express Preschool Curriculum: Bilingual ⁴	Ib	At Risk	$d^b = 0.58$	$d^b = 0.74$	$d^b = 0.39$	-
		Shared Storybook Reading ⁸	Ib	At Risk	$\eta^2 = 0.58$	$\eta^2 = 0.58$	-	-
		Storytelling for the Home Enrichment of Language and Literacy Skills ¹	Ib	At Risk	$d^a = 0.60$	-	-	$d^a = 0.60$
		Words of Oral Reading and Language Development ⁹	Ib	At Risk	$d^b = 0.42$	$d^b = 0.42$	-	-
	Receptive Language	Focused Stimulation Approach: Monolingual ^{13#}	Ib	DLD	$d^a = 0.59$	$d^a = 0.59$	-	-
		Focused Stimulation Approach: Bilingual ^{13#}	Ib	DLD	$d^a = 0.38$	$d^a = 0.38$	-	-
	Expressive Language	Supplemental Instruction Program ¹⁰	IIa	At Risk	$d^a = 0.63$	-	$d^a = 0.63$	-
	Language	Nuestros Niños ²	Ib	At Risk	$d^b = 0.26$	$d^b = -0.15$	$d^b = 0.41$	-
Early Literacy	Literacy Express Preschool Curriculum: Bilingual ⁴	Ib	At Risk	$d^b = 0.73$	$d^b = 0.40$	$d^b = 0.52$	-	
Phonological Awareness	Intervention for Phonemic Awareness ⁶	IIa	At Risk	$d_2^c = 1.34$	$d_2^c = 1.34$	-	-	
	Literacy Express Preschool Curriculum: Monolingual ⁴	Ib	At Risk	$d^b = 0.28$	$d^b = 0.48$	$d^b = 0.08$	-	

		Literacy Express Preschool Curriculum: Bilingual ⁴	Ib	At Risk	$d^b = 0.50$	$d^b = 0.48$	$d^b = 0.56$	-
		Preparing Pequeños ⁷	Ib	At Risk	$d^b = 0.32$	$d^b = 0.14$	$d^b = 0.41$	-
	Writing	Nuestros Niños ³	Ib	At Risk	$d^b = 0.27$	$d^b = 0.20$	$d^b = -0.16$	-
Insufficient Evidence	Receptive Vocabulary	Dual language narrative intervention with embedded vocabulary instruction ¹²	IIa	At Risk	$d^b = 0.66$	$d^b = 0.98$	$d^b = 0.34$	-
		Focused Stimulation Approach: Monolingual ^{13#}	Ib	DLD	$d^a = 0.02$	$d^a = 0.02$	-	-
		Focused Stimulation Approach: Bilingual ^{13#}	Ib	DLD	$d^a = -0.24$	$d^a = -0.24$	-	-
		Hablemos Juntos ¹⁵	Ib	At Risk	$g^b = 0.24$	-	$g^b = 0.24$	-
		Literacy Express Preschool Curriculum: Monolingual ⁴	Ib	At Risk	$d^b = 0.20$	$d^b = 0.34$	$d^b = 0.05$	-
		Nuestros Niños ^{2, 3}	Ib	At Risk	$d^b = 0.07$	$d^b = -0.05$	$d^b = 0.18$	-
		Opstap Opnieuw ¹⁴	IIa	At Risk	$d^b = 0.00$	$d^b = -0.10$	$d^b = 0.09$	-
		Technology-Assisted Storybook Intervention ⁵	IIa	At Risk	NAP ^d = 73%	NAP ^d = 73%	-	-
	Expressive Vocabulary	Hablemos Juntos ¹⁵	Ib	At Risk	$g^b = -0.01$	$g^b = -0.03$	$g^b = 0.02$	-
		Literacy Express Preschool Curriculum: Monolingual ⁴	Ib	At Risk	$d^b = 0.20$	$d^b = 0.37$	$d^b = 0.02$	-
		Nuestros Niños ³	Ib	At Risk	$d^b = 0.17$	$d^b = 0.18$	$d^b = 0.14$	-
		Opstap Opnieuw ¹⁴	IIa	At Risk	$d^b = 0.02$	$d^b = 0.03$	$d^b = -0.06$	-
		Preparing Pequeños ⁷	Ib	At Risk	$d^b = 0.05$	$d^b = -0.05$	$d^b = 0.14$	-
	Expressive Language	Focused Stimulation Approach: Monolingual ¹³	Ib	DLD	NC	NC	NC	-
		Focused Stimulation Approach: Bilingual ¹³	Ib	DLD	NC	NC	NC	-
		Vocabulary, Oral Language and Academic Readiness ¹¹	IIa	At Risk	$d^a = 0.05$	$d^a = -0.11$	$d^a = 0.22$	-
		Vocabulary, Oral Language and Academic Readiness ¹¹	IIa	DLD	$d^a = -0.12$	$d^a = -0.09$	$d^a = -0.15$	-
	Language	Preparing Pequeños ⁷	Ib	At Risk	$d^b = 0.01$	$d^b = -0.02$	$d^b = 0.05$	-
		Nuestros Niños ²	Ib	At Risk	$d^b = -0.11$	$d^b = 0.23$	$d^b = -0.34$	-

Receptive Narrative	Technology-Assisted Storybook Intervention ⁵	Ia	At Risk	NAP ^d = 65%	NAP ^d = 65%	-	-
Expressive Narrative	Dual language narrative intervention with embedded vocabulary instruction ¹²	Ia	At Risk	Positive	Positive	Neutral	-
Morpho-syntax	Focused Stimulation Approach: Monolingual ¹³	Ib	DLD	NC	NC	-	-
	Focused Stimulation Approach: Bilingual ¹³	Ib	DLD	NC	NC	-	-
Early Literacy	Literacy Express Preschool Curriculum: Monolingual ⁴	Ib	At Risk	$d^b = 0.24$	$d^b = 0.40$	$d^b = 0.07$	-
	Preparing Pequeños ⁷	Ib	At Risk	$d^b = 0.11$	$d^b = 0.01$	$d^b = 0.20$	-
Phonological Awareness	Nuestros Niños ^{2,3}	Ib	At Risk	$d^b = -0.03$	$d^b = 0.24$	-	-

Note. † = Where the same domain was examined in more than one language, the average effect size is presented. # = Effect size calculations based on standardised test results only (data were not available for vocabulary probes). *Abbreviations.* EBP = evidence-based practice; DLD = developmental language disorder. Ib = well-designed randomized controlled study; Ia = well-designed controlled study without randomization. *Effect Sizes.* ^a = d_{pcc} calculated by the authors from means, standard deviations and sample sizes reported by study authors, following Morris (2008); ^b = value reported by study authors; ^c = individual effect size following Busk and Serlin (1992) as reported by the study authors; ^d = Nonoverlap of All Pairs (NAP) effect-size index for single-case designs as described by Parker and Vannest (2009); NC = not able to be calculated. *Citations.* ¹Boyce et al. (2010); ²Buysse et al. (2010); ³Castro et al. (2017); ⁴Farver et al. (2009); ⁵Greenwood et al. (2016); ⁶Koutsoftas et al. (2009); ⁷Landry et al. (2019); ⁸Lugo-Neris et al. (2010); ⁹Pollard-Durodola et al. (2018); ¹⁰Restapo et al. (2010); ¹¹Simon-Cerejido and Gutiérrez-Clellen (2014); ¹²Spencer et al. (2019); ¹³Thordardottir et al. (2015); ¹⁴van Tuijl et al. (2001); ¹⁵Zucker et al. (2021).

References

- Boyce, L. K., Innocenti, M. S., Roggman, L. A., Norman, V. K. J., & Ortiz, E. (2010). Telling stories and making books: Evidence for an intervention to help parents in migrant head start families support their children's language and literacy. *Early Education and Development, 21*(3), 343-371. <https://doi.org/10.1080/10409281003631142>
- Busk, P. L., & Serlin, R. C. (1992). Meta-analysis for single case research. In T. R. Kratochwill & J. R. Levin (Eds.), *Single-case research design and analysis: New directions for psychology and education*. Erlbaum.
- Buysse, V., Castro, D. C., & Peisner-Feinberg, E. (2010). Effects of a professional development program on classroom practices and outcomes for Latino dual language learners. *Early Childhood Research Quarterly, 25*(2), 194-206. <https://doi.org/10.1016/j.ecresq.2009.10.001>
- Castro, D. C., Gillanders, C., Franco, X., Bryant, D. M., Zepeda, M., Willoughby, M. T., & Méndez, L. I. (2017). Early education of dual language learners: An efficacy study of the Nuestros Niños School Readiness professional development program. *Early Childhood Research Quarterly, 40*, 188-203. <https://doi.org/10.1016/j.ecresq.2017.03.002>
- Farver, J. A., Lonigan, C. J., & Eppe, S. (2009). Effective early literacy skill development for young Spanish-speaking English language learners: an experimental study of two methods. *Child Development, 80*(3), 703-719. <https://doi.org/10.1111/j.1467-8624.2009.01292.x>

- Greenwood, C. R., Carta, J. J., Kelley, E. S., Guerrero, G., Kong, N. Y., Atwater, J., & Goldstein, H. (2016). Systematic replication of the effects of a supplementary, technology-assisted, storybook intervention for preschool children with weak vocabulary and comprehension skills. *The Elementary School Journal*, 116(4), 574-599. <https://doi.org/10.1086/686223>
- Koutsoftas, A. D., Harmon, M. T., & Gray, S. (2009). The effect of Tier 2 intervention for phonemic awareness in a response-to-intervention model in low-income preschool classrooms. *Language, Speech, and Hearing Services in Schools*, 40(2), 116-130. [https://doi.org/10.1044/0161-1461\(2008/07-0101\)](https://doi.org/10.1044/0161-1461(2008/07-0101))
- Landry, S. H., Assel, M. A., Carlo, M. S., Williams, J. M., Wu, W., & Montroy, J. J. (2019). The effect of the Preparing Pequeños small-group cognitive instruction program on academic and concurrent social and behavioral outcomes in young Spanish-speaking dual-language learners. *Journal of School Psychology*, 73, 1-20. <https://doi.org/10.1016/j.jsp.2019.01.001>
- Lugo-Neris, M. J., Jackson, C. W., & Goldstein, H. (2010). Facilitating vocabulary acquisition of young English language learners. *Language, Speech, and Hearing Services in Schools*, 41(3), 314-327. [https://doi.org/10.1044/0161-1461\(2009/07-0082\)](https://doi.org/10.1044/0161-1461(2009/07-0082))
- Morris, S. B. (2008). Estimating effect sizes from pretest-posttest-control group designs. *Organizational Research Methods*, 11(2), 364-386. <https://doi.org/10.1177/1094428106291059>
- Parker, R. I., & Vannest, K. (2009). An improved effect size for single-case research: Nonoverlap of all pairs. *Behavior Therapy*, 40(4), 357-367. <https://doi.org/10.1016/j.beth.2008.10.006>
- Pollard-Durodola, S. D., Gonzalez, J. E., Saenz, L., Resendez, N., Kwok, O., Zhu, L., & Davis, H. (2018). The effects of content-enriched shared book reading versus vocabulary-only discussions on the vocabulary outcomes of preschool dual language learners. *Early Education and Development*, 29(2), 245-265. <https://doi.org/10.1080/10409289.2017.1393738>
- Restrepo, M. A., Castilla, A. P., Schwanenflugel, P. J., Neuharth-Pritchett, S., Hamilton, C. E., & Arboleda, A. (2010). Effects of a supplemental Spanish oral language program on sentence length, complexity, and grammaticality in Spanish-speaking children attending English-only preschools. *Language, Speech, and Hearing Services in Schools*, 41(1), 3-13. [https://doi.org/10.1044/0161-1461\(2009/06-0017\)](https://doi.org/10.1044/0161-1461(2009/06-0017))
- Simon-Cerejido, G., & Gutiérrez-Clellen, V. F. (2014). Bilingual education for all: Latino dual language learners with language disabilities. *International Journal of Bilingual Education and Bilingualism*, 17(2), 235-254. <https://doi.org/10.1080/13670050.2013.866630>
- Spencer, T. D., Petersen, D. B., Restrepo, M. A., Thompson, M., & Gutierrez Arvizu, M. N. (2019). The effect of Spanish and English narrative intervention on the language skills of young dual language learners. *Topics in Early Childhood Special Education*, 38(4), 204-219. <https://doi.org/10.1177/0271121418779439>
- Thordardottir, E. T., Cloutier, G., Ménard, S., Pelland-Blais, E., & Rvachew, S. (2015). Monolingual or bilingual intervention for primary language impairment? A randomized control trial. *Journal of Speech, Language, and Hearing Research*, 58, 287-300. https://doi.org/10.1044/2014_JSLHR-L-13-0277
- van Tuijl, C., Leseman, P. P. M., & Rispen, J. (2001). Efficacy of an intensive home-based educational intervention programme for 4- to 6-year-old ethnic minority children in the Netherlands. *International Journal of Behavioral Development*, 25(2), 148-159. <https://doi.org/10.1080/01650250042000159>
- Zucker, T. A., Carlo, M. S., Montroy, J. J., & Landry, S. H. (2021). Pilot test of the Hablemos Juntos Tier 2 academic language curriculum for Spanish-speaking preschoolers. *Early Childhood Research Quarterly*, 55, 179-192. <https://doi.org/10.1016/j.ecresq.2020.11.009>