Online supplemental materials, Storkel et al., "Interactive Book Reading to Accelerate Word Learning by Kindergarten Children With Specific Language Impairment: Identifying an Adequate Intensity and Variation in Treatment Response," *LSHSS*, doi:10.1044/2016\_LSHSS-16-0014

The relationship between treatment response versus non-response also was examined for demographic characteristics for the 21 children in conditions that yielded some treatment responding (i.e., intensities 24, 36, and 48). The first column of Table 3b shows the overall characteristics of this sample of 21 children. The second column shows the percentage of children who responded to treatment that had the majority characteristic of the subsample. For example, 71% of the children who responded to treatment (i.e., 5 of 7) were boys. The third column shows the percentage of children who did not respond to treatment that had the majority characteristic. For example, 50% of children who did not respond to treatment (i.e., 7 of 14) were boys. If the demographic characteristic is not associated with treatment response, then we would expect each of the subgroups (i.e., children who responded to treatment vs. children who did not respond to treatment) to show a similar percentage of the characteristic as the overall sample (e.g., approximately 57% of children in each group should be boys). This was tested statistically using a chi square test, which is shown in the first column of Supplemental Table S3b. For example, for gender, the chi square test indicates that the association between gender and presence versus absence of a treatment response is not significant.

**Supplemental Table S3b.** Demographic characteristics of children who responded to treatment compared to children who did not respond to treatment.

Demographic characteristics	Children who responded to treatment $(n = 7)$	Children who did not respond to treatment $(n = 14)$
Gender: $\gamma 2 (1, N = 21) = 0.90, p = .34$		
Boys $(n = 12, 57\%)$	71%	50%
	(n = 5)	(n = 7)
Race: $\chi 2$ (2, $N = 21$ ) = 5.46, $p = .07$		
White ( <i>n</i> = 18, 86%)	71%	93%
	(n = 5)	( <i>n</i> = 13)
Ethnicity: $\chi^2 (2, N = 21) = 4.84, p = .09$		
Non-Hispanic ( <i>n</i> = 15, 71%)	57%	79%
	(n = 4)	(n = 11)
Parent marital status: $\chi 2$ (2, $N = 21$ ) = 4.84, $p = .09$		
Married ( $n = 15, 71\%$ )	57%	79%
	(n = 4)	(n = 11)
Mother's education: $\chi^2 (3, N = 21) = 6.08, p = .11$		
% College graduates ( $n = 7, 33\%$ )	43%	29%
	(n=3)	(n=4)
% Partial college ( $n = 8, 38\%$ )	57%	29%
	(n=4)	(n=4)
% High school graduates $(n = 5, 24\%)$	0%	36%
	(n = 0)	(n = 5)

Demographic characteristics	Children who responded to treatment $(n = 7)$	Children who did not respond to treatment $(n = 14)$
Father's education: $\chi^2$ (4, $N = 21$ ) = 7.64, $p = .11$		
% College graduates ( $n = 2, 10\%$ )	0%	14%
	(n = 0)	(n = 2)
% Partial college ( $n = 5, 24\%$ )	43%	14%
	(n = 3)	(n = 2)
% High school graduates $(n = 4, 19\%)$	0%	29%
	(n = 0)	(n = 4)
% Unknown ( $n = 9, 43\%$ )	57%	36%
	(n = 4)	(n = 5)

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None of the demographic characteristics were significantly associated with treatment responding. However, several characteristics approached significance: race, ethnicity, parent marital status. In terms of race, fewer children who were white responded to treatment than expected. An alternative way of looking at race is to note that the two children in the sample who were African American (10% of sample) both responded to the treatment. In terms of ethnicity, fewer children who were non-Hispanic responded to treatment than expected. Alternatively, of the four children who were Hispanic (19% of sample), three responded to treatment, indicating a greater than expected response to treatment in this group. In terms of parent marital status, fewer children whose parents were married responded to treatment than expected. Alternatively, of the four children whose parents were single (19% of sample), three responded to treatment. It is notable that the variables that approached significance indicated that treatment responding was observed in children from non-majority groups. This suggest that the treatment may be effective for a diverse population of children, although this study did not address efficacy or effectiveness of the treatment. However, it should be noted that these more diverse children who responded to treatment also may have had a protective factor in terms of mother's education. Although mother's education was not significantly related to treatment outcomes, children who responded to treatment had mothers who either graduated from college or completed partial college. Also, recall that children whose fathers were college graduates were more prevalent in intensity 36. However, the data in Supplemental Table S3b shows that these children were actually the ones that did not respond to treatment. These patterns highlight the difficulty of evaluating the relationship between nominal demographic characteristics and treatment response in a small sample of children. More research clearly is needed to better understand the relationship between child demographics and treatment responding but Supplemental Table S3b provides a foundation for future inquiry.