Results: Treatment Intensity—Definition task: Number of words defined correctly

Similar to Supplemental Figure S1, Supplemental Figure S2 provides block-by-block data for each treatment intensity for the definition task. However, rather than showing the percentage of children who responded to the treatment, Supplemental Figure S2 shows the number of words with correct definitions for control words at pre-treatment (open bars) and post-treatment (lightly shaded bars) as well as treated words at pre-treatment (medium shaded bars) and post-treatment (black bars). The average number of treated words correct at post-treatment also is noted at the top of the black bars. The goal of this analysis was to provide converging evidence with the primary analysis to ensure that a more detailed look at the actual number of treated words learned would identify the same intensity as adequate or promising.

Supplemental Figure S2. The average number of words with correct definitions for each treatment intensity (12, 24, 36, 48) by enrollment block. Pre-treatment control words are shown with 0% shaded bars. Post-treatment control words are shown with 25% shaded bars. Pre-treatment treated words are shown with 50% shaded bars. Post-treatment treated words are shown with 100% shaded bars. The trendline illustrates the polynomial trend for post-treatment treated words, also depicted by the regression equation noted in each panel.

Pattern 1: No clear pattern

No clear pattern emerged in block 1. Children in intensities 12 and 36 did not define any words correctly at the post-treatment definition test. In contrast, children in intensities 24 and 48 defined 3 treated words correctly at the post-treatment definition test.
Pattern 2/Final Pattern: Number of treated words learned by post-treatment increases from intensity 12 to 24 to 36 and then decreases for intensity 48.

In the second block, a clear pattern emerged for the treated words. Children in intensity 12 defined 2 treated words correctly post-treatment. The number of words defined correctly increased from 12 to 24 exposures. Children in intensity 24 defined 4 treated words correctly post-treatment. Further increases in the number of treated words defined correctly are observed as intensity increased from 24 to 36. Children in intensity 36 defined 7 treated words correctly post-treatment. The number of treated words defined correctly then reduces as intensity increases from 36 to 48 exposures. Children in intensity 48 defined 5 treated words correctly post-treatment. Note that the number of treated words defined correctly post-treatment in intensities 24, 36, and 48 is appreciably higher than the number of control words defined correctly pre-treatment and post-treatment and higher than the number of treated words defined correctly pre-treatment.

This pattern of the number of treated words defined correctly post-treatment increasing from 12 to 24 to 36 exposures and then decreasing as exposures increased to 48 was observed in all remaining blocks, as shown below. This pattern also mirrors the pattern observed in Figure S1. Thus, the percentage of children showing a response to treatment and the number of treated words defined correctly post-treatment converge on the conclusion that intensity 36 is the most promising of the four intensities tested.