***Appendix C: Preliminary Analyses of Picture Word Data***

To determine whether results could be collapsed across the different distractor onsets (/b/ vs /g/), we examined the effect of the onset on the baseline and experimental conditions.

***Baseline Conditions***. A factorial mixed-design analysis of variance was carried out with one between-participants factor (four age groups) and three within-participant factors representing lexical status (words vs nonwords), mode (auditory vs audiovisual), and onset (/b/ vs /g/). Results indicated that the baseline picture naming times did not differ as a function of the onset.

***Experimental Conditions***. We quantified the facilitation in picture naming produced by the phonologically-related distractors with adjusted picture naming times derived by subtracting each participant’s baseline naming times from his or her phonologically-related naming times as done previously (e.g., Jerger et al., 2002; Jerger et al., 2009). Analysis of the adjusted picture naming times consisted of one between-participants factor (four age groups) and four within-participant factors representing lexical status (words vs nonwords), fidelity (intact vs non-intact), mode (auditory vs audiovisual), and onset (/b/ vs /g/). Results revealed that the phonologically-related distractors facilitated picture naming significantly more overall for the /b/ than /g/ onsets (–147 vs –117 ms; i.e., a difference of 30 ms), *F* (1,128) = 69.63, *MSE* =6063.32, *p* < .0001, partial η2 = .352. The difference between the adjusted naming times for the /b/ vs /g/ onsets was also significantly greater in the audiovisual mode (respectively –179 vs –141 ms; i.e., a difference of 38 ms) than the auditory mode (–114 vs –94 ms; i.e., a difference of 20 ms), with a significant onset x mode interaction, *F* (1,128) = 18.17, MSE =2170.20, *p* < .0001, partial η2 = .142. No other significant onsets effects were observed. Despite the statistically significant outcomes, the differences in performance between the two onsets were small and did not interact with lexical status (words vs nonwords) or fidelity (intact vs non-intact). Thus, for the primary analyses, all naming times were collapsed across the onsets for simplicity.