Pauses or phonemic cues: What makes alphabet supplementation work?

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Persons with motor speech disorders can dramatically increase their speech intelligibly by using an alphabet board to point to the first letter of each word as they say it. This compensatory strategy is called alphabet supplementation. It appears to work by slowing the speaking rate and imposing word boundaries as the speaker points to the first letter of each spoken word and by providing phonemic information about word beginnings. This combination can have a dramatic effect on speech intelligibility with documented increases of 25%-36% at the sentence level. This study tested the idea that pauses in the speech signal and phonemic information provided by alphabet cues were both important to intelligibility. Visual alphabet cues were edited into video of six speakers with dysarthria as they produced sentence sets from the Hearing In Noise Test. The resulting four experimental conditions included habitual without visual cues (HS-), habitual with visual cues (HS+), alphabet supplemented speech without visual cues (AS-) and alphabet-supplemented speech with visual cues (AS+). Forty listeners transcribed the sentences for intelligibility scores. Preliminary results demonstrated that no significant ($p > .05$) difference between the HS- and the AS- conditions, suggesting that visible alphabet cues.