

# EFFECTS OF TRAINING MODALITY ON AUDIO-VISUAL PERCEPTION OF NONNATIVE SPEECH CONTRASTS

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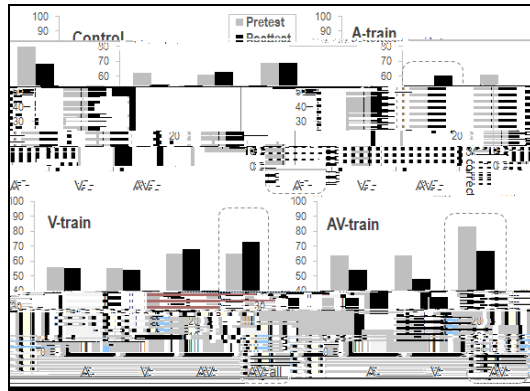
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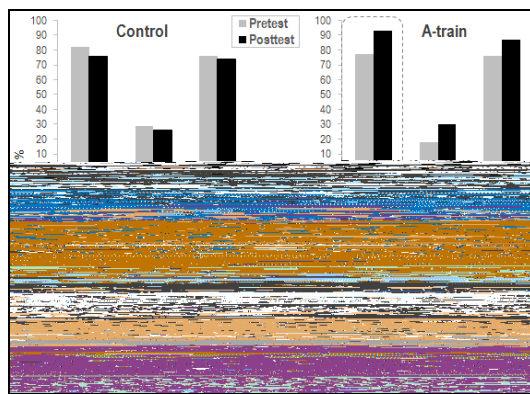
## 1. INTRODUCTION

Speech perception often involves integrated auditory and visual modalities [1,2]. While nonnative perceivers can be facilitated by visual information when perceiving L2 sounds just as the natives, they may also be impeded in correct use of L2 visual cues, as they are not sensitive to the

For the alveolars (Figure 1b), significant improvements were observed for the following groups and modalities: (1) A-train group with A modality [from 77% to 93%;  $F(1,10)=7.9$ ,  $p<.019$ ]; (2) V-train group with V modality [from 21% to 42%;  $F(1,10)=31.9$ ,  $p<.001$ ], and AV modality [from 80% to 91%;  $F(1,10)=7.9$ ,  $p<.019$ ]; and (3) AV-train group with AV modality [Pretest: 86%, Posttest: 92%;  $F(1,10)=5.7$ ,  $p<.038$ ].



(a) Interdentals



(b) Alveolars

**Fig. 1.** % correct responses for (a) interdental and (b) alveolar fricative perception at pretest and posttest by perceivers in Control, A-train, V-train, and AV-train groups. (Significant pre- and posttest differences are circled. AV-all: % correct for both POA and voicing.).

#### 4. DISCUSSION AND CONCLUSIONS

The results revealed a noticeable effect of training modality, where the extent of post-training improvement was consistent with the type of training; that is, the A-train