Title of paper: Cognitive factors in speech perception by CFL listeners

Significance of the study
Listening is often the weakest skill for L2 learners. This study explores how the cognitive factors influence CFL learners’ perception. The results could help CFL learners develop some specific listening skills and interpret some reasons that input fails to become intake during L2 perception.

Theoretical framework/background
According to the TRACE model (Elman & McClelland, 1988), several levels of processing are simultaneously active during NS speech perception and interact with each other. However, it is not clear whether various cues are processed in NNS perception and it is controversial whether L2 learners paid more attention to lexical (e.g. Conrad, 1985), morph-syntactic (e.g. Field, 2008) or other cues (e.g. Ito and Strange, 2009). This study explores whether and how the cognitive factors (including working memory and lexical, phonological and morph-syntactic cues) and some salient linguistic features of Chinese influence speech perception by CFL listeners.

Research procedure
Nineteen NS of Chinese and 20 American learners of Chinese who have learned Chinese for three years in colleges participated in this project. The study combines the error detection task with a shadowing task in which subjects have to repeat the sentences that they hear immediately. They were required to repeat the incorrect words exactly, as opposed to restoring the “intended” words. The stimuli are 18 experimental sentences and 2 fillers. Each sentence has 15 syllables. The speech rate is a little faster than the normal rate. All the words in these sentences were chosen from Integrated Chinese which the learners had studied. There are three types of incorrect words: lexical error (a real or pseudo word that has semantic relationship with the original word); phonological error (wrong segment or tone); morph-syntactic error (incorrect classifier or aspect). In this design, tones and classifiers were served as salient features of Chinese. We examined which cognitive factors facilitate NS and NNS to repeat the incorrect words exactly. The speech rates of the repetition were also observed.

Major findings
The results indicated that the restorations occur in NS speech only when a segment is mispronounced. As for NNS, semantic cue appear to be the most salient in perception. NNS restored almost three times of “intended” words than NS. The unique features of Chinese appear to be an important factor in NS perception, while not in NNS perception. The results revealed that the working memory, semantic and morph-syntactic constraints and L2 linguistic features play important roles in NS perception while NNS prefer using the semantic cue to others due to the working memory capacity.

References