Developing L2 Reference Tracking Skills through CALL

Computer-assisted language learning (CALL) has been proved effective in lower-level reading skills such as vocabulary acquisition. However, little is known about whether higher-level reading skills such as reference tracking skills can be effectively taught through CALL. The purpose of this study is to find out whether a CALL system can be more effective than the traditional classroom instruction in teaching reference tracking skills in Chinese. We designed a CALL system and implemented a pedagogical method to teach specific Chinese reference tracking skills—the identification of zero anaphors and the matching of their antecedents. According to the psycholinguistic theory of reference tracking (Tao, 1996), zero anaphoric inference skills are the combination of three sub-skills: (1) identifying zero anaphors, (2) matching antecedent, (3) integrate reference information with context to construct a coherent mental representation of the text. Based on this definition, we pinpointed three components for zero anaphoric inference in successful text comprehension: (i) identify zero anaphors; (ii) properly match the zero anaphors with their antecedents in the discourse; (iii) integrate the information with the context, and construct a coherent mental representation of the text. Based on the Sociocultural Theory (Lantolf & Thorne, 2006) in Second Language Acquisition, we designed and implemented a pedagogy method which included three elements: scaffolding, engagement and reflection.

Forty-five learners of Chinese were randomly assigned to three groups: control group, teacher-directed classroom instruction group, and computer-based group. The classroom instruction and the CALL group received six-week training in addition to taking regular Chinese class. The three components of the zero anaphoric tracking skills were illustrated explicitly with ample examples. The test battery of the experiment was a paper-and-pencil test that consisted of three tests: pretest, immediate posttest and delayed posttest. Each test included three parts: (1) 10 items for marking the positions of zero anaphors in texts, and identifying the types of the zero anaphors: 1 point for marking a correct position; one point for correctly identifying a zero anaphors. Together there were 20 points here. (2) 10 items for matching the antecedents and identifying the discourse cue(s) for the matching: 1 point for correctly matching the antecedent, and 1 point for correctly identifying at least one discourse cue for the matching. Together there were 20 points here. (3) 10 multiple-choice questions testing the reading comprehension of two texts: 1 point for each multiple-choice question.

The results show that although both the classroom group and the CALL group made progress, the CALL group made significantly more improvement. We concluded that some higher-level reading skills could be taught more effectively through CALL.

References:
