

Project: A Mobile, Personal Reading Tutor for Learners of Chinese

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Abstract:

Extensive, extra-curricular reading is important for learning foreign languages. Learners therefore need to venture beyond their textbooks to seek additional reading materials. However, it is often difficult to identify suitable materials with an appropriate number of new words to stretch vocabulary knowledge, but not to hinder comprehension. Most existing systems require users to choose a level on a proficiency scale. These scales can be opaque for users, and often too coarse-grained to cater to individual needs. We present a personal and adaptive text retrieval method for language learning. A user can search for documents with the desired percentage of words that are new to himself or herself. To compute this percentage, the learner model estimates the user's vocabulary knowledge, and dynamically updates itself through user interactions.

This report describes our implementation of this method in a personal reading tutor on a mobile app, and presents empirical evaluations in the context of learning Chinese as a foreign language. We investigate the performance of the personalized learner model in predicting new vocabulary, and the extent to which the model helps users retrieve texts at their desired difficulty levels.

Keywords:

Computer-assisted language learning (CALL); Mobile learning; Chinese as a foreign language; Readability assessment; Natural language processing