

1. Title of submission: The implicit and explicit learning of orthographic structure and function of a new writing system
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 6. Abstract:
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Two experiments were carried out to examine how alphabetic readers learn to acquire orthographic structure and function of Chinese characters. The first experiment, an on-line lexical decision task, demonstrated that the learners quickly acquire implicit orthographic structure of the characters. With only limited vocabulary and without explicit instruction, they were sensitive to the character's curriculum frequency and internal compositional features. These results were consistent with our previous findings (Wang, Perfetti, & Liu, 2001). The second experiment further tested the learners' implicit and explicit knowledge of the orthographic component function of the character. In an off-line unknown character identification task, these learners showed difficulty in making use of the functional cue of the known semantic radical without any probe. However, with probe they identified visually the majority target semantic radicals and demonstrated certain implicit knowledge of the meaning cue of the semantic radical. The effect of the frequency of the known radicals was significant, with better performance on high frequency than low frequency ones. After given explicit instruction, the students extracted significantly more meaning information from both low and high frequency semantic radicals.