The International Research Foundation
for English Language Education

Title of Project:
Structural Equation Models of the Impact of Cognitive and Metacognitive
Lexicogrammatical Strategic Processing on EFL Students' Lexico-grammatical
Test Performances Over Time: A Multitrait-multimethod Approach

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Project Summary:

Strategic processing is one of the key factors affecting L2 test-takers' performance (Bachman and Palmer, 2010). However, only few studies have investigated the relationships between test-takers' perceived knowledge of what they would do when facing a language use activity or a language test and actual thinking or behavior in a test with the aim of validating strategic competence theory (Bachman & Palmer 1996, 2010). In addition, Phakiti (2007) points out that human cognitive processing is subtle and greatly depends on specific contexts. However, little is known about the stabilities or variations of the influences of strategic processing on test performance over time. This research project therefore conducted two empirical studies to address these issues.

Study One is a large scale cross-sectional study (N=460) and Study Two is a longitudinal one in which three lexico-grammatical tests and various sets of strategy use questionnaires were given to Chinese EFL students over 3 months (1-month interval; N=627). The cross-sectional study aims to reveal the nature of strategic competence and provide a baseline model, while the purpose of the longitudinal investigation is to assess and evaluate the theoretical issues of 'performance consistency' (both lexico-grammatical and strategic abilities) over time through a multi-trait multi-method approach via the use of structural equation modeling (SEM) (together with Rasch Item Response Theory). Study One found that the nature of strategic competence is highly complex. It is more than a set of metacognitive strategies as proposed by Bachman and Palmer (2010), but it should be considered as the metacognitive function of human cognition. It was found strategic competence is associated with general metacognitive awareness and online strategic processing. Metacognitive awareness as a long-term thought in L2 test-takers' brain, constantly manages and regulates their use of language in test-taking. Furthermore, strategic

competence does not directly contribute to language test performance, since it acts as a cluster of strategic processing, which individually has direct/indirect positive effect on test performance.

Preliminary results of Study Two suggested that though test-takers' test performance were relatively stable, their strategic processing varied significantly over time. The SEM results showed that test-takers' strategic processing employed in the test became more stabilized and automatic. That is to say, test-takers might experience a process of being conscious to unconscious with regard to their mental processing. Additionally, strategic behaviours would account for more of test performance variances, when test-takers faced unfamiliar and difficult test tasks. However, even the difficulty of the test tasks was similar, after test-takers' strategic processing became an automatic process, the impact of strategic thinking and behaviours would account less or even little on their actual performances.