Biliteracy Development: Metalinguistic Knowledge and Bilingual Academic Performance

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KEY IMPLICATIONS
1. Provide systematic training in metalinguistic skills to lower primary school children.
2. Consider the potential value of bilingual instructional strategies.
3. Encourage Chinese language use at home.

ABSTRACT
Drawing on Cummins’ Common Underlying Proficiency (CUP) theory, this study is an investigation of the relationships between metalinguistic awareness and academic language proficiency in simultaneous English-Chinese bilingual Primary 3 (P3) children in Singapore (N = 390). Comparable tasks in English and Chinese were administered to examine the children’s phonological, morphological and syntactic awareness, as well as their vocabulary knowledge, reading fluency, reading comprehension and composition. The results demonstrated that all three aspects of metalinguistic awareness were significantly correlated with vocabulary knowledge, reading fluency, reading comprehension and composition. Morphological awareness and syntactic awareness were more closely related to these proficiency tasks than phonological awareness. Furthermore, the results indicate a robust bidirectional cross-linguistic transfer of metalinguistic awareness, which serves as a common underlying construct to support academic language proficiency in both English and Chinese. Our study also highlights the importance of home language use to biliteracy development, which bears significant implications for policy planning.

INTRODUCTION
The present research explored the relationship between metalinguistic awareness/knowledge and academic language proficiency in two of Singapore’s official languages, English and Chinese among P3 children in Singapore. Specifically, it aimed to:
1. Examine the metalinguistic abilities of bilingual Chinese-English students in three core linguistic domains: phonological, syntactic and morphological awareness;
2. Examine the level of metalinguistic awareness in relation to academic proficiency in English and Chinese;
3. Examine the cross-linguistic relationship between English and Chinese academic language proficiency.

RESEARCH DESIGN
The present study made use of an ex post facto quantitative design to investigate metalinguistic awareness and its effects on academic language performance among English-Chinese bilingual children in Singapore who receive concurrent formal instruction in both languages. A battery of published and self-developed tests was administered to assess phonological, morphological, and syntactic awareness, vocabulary knowledge, reading fluency, reading comprehension and composition in both English
for developing their Chinese metalinguistic awareness.

**KEY FINDINGS**

By adopting a holistic approach to address various aspects of metalinguistic awareness (phonological, morphological and syntactic awareness), the present study came up with several important findings:

1. Within each language, all three aspects of metalinguistic awareness (phonological, morphological and syntactic awareness) were significantly correlated with vocabulary, reading fluency, reading comprehension and composition. Notably, morphological and syntactic awareness were more closely related to these proficiency tasks than phonological awareness.

2. A robust bidirectional cross-linguistic transfer of metalinguistic awareness was found, which may serve as a common underlying construct to support academic language proficiency in both English and Chinese. Specifically, there was an indirect English metalinguistic effect on Chinese academic language proficiency, which was mediated by Chinese metalinguistic awareness, and vice versa.

3. Home language use has been found to not only facilitate the development of metalinguistic awareness in both languages, but also uniquely predict academic language proficiency, especially for Chinese. This suggests that while continual exposure to the English speech in natural social settings may enhance children’s understanding of the English language at a metalinguistic level, less exposure to Chinese may also put children in a disadvantageous position for developing their Chinese metalinguistic awareness.

**IMPLICATIONS FOR POLICY/ PRACTICE**

The findings from the present study have several pedagogical and policy implications.

1. Given the significant association between metalinguistic awareness and academic language proficiency, more attention needs to be given to increasing children’s metalinguistic awareness, especially morphological awareness and syntactic awareness. One possible strategy would be providing systematic training in metalinguistic skills to lower primary school children.

2. The potential value of bilingual instructional strategies should be more actively explored. Research suggests that a successful bilingual program should provide for the development of academic skills and concepts in both languages. As revealed by the present study, metalinguistic awareness in one language is associated with academic literacy skills in the other language. This suggests that knowledge of, and skills in, the two languages are interconnected and that bilingual instruction can facilitate the integration and development of metalinguistic awareness and literacy in both languages.

3. Chinese language use at home needs to be encouraged, since the results show that language exposure at home directly affects Chinese academic language proficiency. For children with less Chinese input, their Chinese metalinguistic skills and academic language proficiency will be limited, which will jeopardize their acquisition of advanced academic language proficiency in Chinese.