Cognitive control change in the language learning domain.

Jang Ho Park, Kichun Nam
Department of Psychology, Korea University

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Abstract

The purpose of this experiment is to investigate the difference between language control and cognitive control mechanism. Also, we investigate changes in cognitive control ability caused by studying foreign language. Two kinds of tasks have been used in the experiment, language switch task and response conflicted task. English was chosen as a foreign language to learn for four weeks. English listening comprehension condition was separated into two groups: one group is a pause group and the other group is a non-pause group. Language switch task used numeral stimuli and had two kinds of color conditions: one color condition was Korean reading and the other color condition was English reading. Response conflict task used two kind of conditions, congruent condition and incongruent condition. The result of this study is that participants’ reaction time was faster than before they studying English but there was no difference between the two conditions. However, item analysis shows significant differences between the conditions.

Introduction

Bilingual cognitive control was debated that used some cognitive control mechanism in language control (Green, 1998) or used different language control mechanism (price 1999). We want to reveal bilinguals control mechanism in language. Also, the purpose of this study is late bilingual cognitive control change to learn foreign language.

Method

Twenty three students of Korea University participated in this experiment. The participants are divided into two groups. One group is pause lessoning condition group and the other group is non-pause lessoning condition group. They took in English listening comprehension for 4 weeks. The participants before and after the listening study conducted two kinds of tasks: Language switching task and response conflicted task.

Procedure

Language switching task used Arabic number that separated two kinds of language conditions to used different color. English condition presented blue number and Korean condition showed red number. Participants were instructed to read the numbers for different language condition.

Discussion

The results of this experiment shows a reduction in the reaction time after learning English from the two tasks. But there is no statistical difference between the before and after learning English. So a statistically significant result cannot be derived, due to insufficient number of participants. However, there are certain significant differences between the two groups when the analysis item is performed.

References