

The Relationship between English Proficiency and Logical Thinking Ability, and the Influence of Native Language Differences on Logical Thinking: A Study Based on the Results of an International Survey

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Abstract:

Since 2013, my research team has been conducting tests on English proficiency, logical thinking, and critical attitudes to junior high school, high school, and university students in Japan, analyzing the results.

This presentation will first present an analysis of the data we have collected. Our findings indicate that among the four components of logical thinking attitudes based on Bloom's Taxonomy (analytical ability, evaluation ability, reasoning ability, and expressive ability), students with higher analytical, evaluation, and expressive abilities—particularly the latter two—tend to exhibit higher English proficiency.

Next, the presentation will introduce the results of our newly conducted survey and address new issues that have arisen. In 2023, we expanded our survey to include students whose native language is not Japanese to see if the same trends would emerge. During this process, two issues were identified: 1) whether the logicity of Japanese is the same as that of English, and 2) whether logicity varies across different languages.

Finally, the presentation will analyze the results of the newly conducted logical thinking tests, and discuss whether the observed differences in the results are related to the unique logical structures inherent in each language.