

# Constructing Multilingual Readability Metrics for Cross-Language FKGL Comparisons

Yo Ehara

Tokyo Gakugei University, Koganei, Tokyo, Japan

## Abstract

The Flesch-Kincaid Grade Level (FKGL) is a widely used readability measure for English. However, the formula involves English-specific word counts, making it difficult to establish a comparable formula in other languages. This study provides a theoretical analysis of the FKGL formula, uncovering its fundamental principles. Unlike prior work, we demonstrate that the formula can be reinterpreted as representing the “average syllable count per sentence.” While vocabulary breadth expands with increasing grade levels, the range of syllables per word remains constant, regardless of age or grade. This invariance likely contributes to FKGL’s enduring applicability. We validate our framework using empirical evaluations with the British National Corpus (BNC), confirming the theoretical soundness of our approach. Furthermore, we extend the FKGL formula to other languages, proposing a multilingual readability metric. This research not only deepens our understanding of existing readability measures but also provides a robust framework for cross-linguistic readability comparisons.