

# Extensive eye-tracking dataset derived from Japanese L2 English learners' text reading

June 20 2024

---



Credit: Pixabay/CC0 Public Domain

Language processing is a highly intricate human function, and it has been extensively studied in the fields of psychology and education. Eye movement measurement, particularly for written language, has proven to

be a beneficial method for language processing.

In recent years, numerous initiatives have been undertaken to collect, organize, and publish large-scale eye-movement data during reading in first and second/[foreign languages](#). However, these efforts have primarily focused on English learners in Europe and its surrounding regions. To date, there has been a lack of focus on text reading among Japanese speakers learning English.

In a [study](#), published in *Research Methods in Applied Linguistics*, researchers constructed an eye-movement [dataset](#), comprising more than 410,000 words, for Japanese students engaged in text reading in English.

The dataset includes eye-movement data for approximately 10,000 words per individual from 41 Japanese undergraduate and graduate students. These students read passages used for Eiken Grade Pre-2 to Grade Pre-1.

From these data, the researchers computed nine eye-tracking measures for each word in the text, including fixation count, fixation duration, word skipping, and regressions. They conducted various analyses and confirmed the high reliability and validity of the collected data.

[The Tsukuba Eye-tracking Corpus \(TECO\) is now publicly available on the Open Science Framework](#). This dataset is beneficial for research on reading comprehension and second language acquisition.

Furthermore, it holds potential for [natural language processing](#) and [artificial intelligence research](#) and is expected to have a considerable impact on future research across a broad spectrum of academic fields.

**More information:** Shingo Nahatame et al, TECO: An Eye-tracking Corpus of Japanese L2 English Learners' Text Reading, *Research*

*Methods in Applied Linguistics* (2024). [DOI: 10.1016/j.rmal.2024.100123](https://doi.org/10.1016/j.rmal.2024.100123)

Provided by University of Tsukuba

Citation: Extensive eye-tracking dataset derived from Japanese L2 English learners' text reading (2024, June 20) retrieved 27 June 2024 from <https://phys.org/news/2024-06-extensive-eye-tracking-dataset-derived.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.