

# The study of complex cognitive activity underpinning L2 writing

Dr. [Gabriela Adela Gánem-Gutiérrez](#) (with Dr. Alex Gilmore, University of Tokyo)

## The project aims to investigate:

- (1) The complex cognitive activity underpinning the planning, formulation, transcription, reading and revising processes involved in the production of academic text in a second language
- (2) The role of verbalisation as a developmental mechanism for cognitive and language knowledge change in a second language writing context.

The participants are 26 adult EFL students at the University of Tokyo. Data were collected through a combination of complementary data collection methods (eye tracking, keystroke logging and SRTA protocols) to better understand the difficulties EFL university students face when composing English academic essays in real time, and to identify practical ways they can be helped to improve their writing strategies.

Our increasing understanding of second language (L2) writing processes has begun to illuminate the enormous difficulties facing students when they compose texts in English. The main problems for learners are likely to occur at two particular stages of the composition process: a) the formulation stage, when they have to put their ideas into linear form, through selection of appropriate words from their mental lexicon, given the syntactic, ideational or rhetorical constraints of the task (Murphy and Roca de Larios 2010); and b) the redrafting stage, when they have to incorporate feedback from peer reviewers into their work in order to revise and improve it (e.g. Ferris 2007). To help students with the problems they are facing in these two critical stages, we need to have a clear idea of exactly what is happening, moment by moment, inside the writer's head, but tapping into these cognitive processes is far from easy. This research project aims to combine, for the first time, some of the best data collection methods available – eye tracking, keystroke logging and stimulated retrospective think aloud protocols – in order to provide a rich description of the real time L2 text construction and revision processes used by EFL students at different levels of proficiency. This should enable us to better understand the problems faced by genuine second language writers, and the variety of strategies they use to overcome their difficulties. These insights will, in turn, allow us to develop training materials, based on sound empirical evidence, with which to raise learners' awareness of effective strategies for writing in a second language.

## What will be elucidated

By studying the writing behaviours and cognitive processes of EFL learners with varying proficiency levels as they plan, formulate, evaluate and revise their English essays, we will address the following research questions:

1. What are the preferred sources of online L2 support for EFL university students whilst completing writing tasks in English?

2. How do strategies for using online dictionaries/Thesauri/corpora during writing tasks vary between learners or proficiency levels?
3. What impact does proficiency level have on other writing processes observed?
4. To what extent do the chosen data collection measures provide insights into the cognitive processes at play during second language writing tasks?
5. To what extent are the best L2 writing strategies identified in the study potentially teachable to other students?

Furthermore, microgenetic multimodal analysis of interactions between students and their tutor during Stimulated Retrospective Think Aloud (SRTA) sessions, we allow us to:

1. Investigate and document co-construction of knowledge during interaction;
2. investigate and document verbalisation patterns in the data;
3. investigate the relationship between L2 proficiency level and verbalisation patterns;
4. ascertain the potential of verbalisation as a developmental tool based on levels of microgenesis across the data.