

Do L2 vocabulary proficiency, working memory, and strategy use influence L2 learning in the DDL-task?

What this research was about and why it is important

Data-Driven Learning (DDL) drives learners to acquire vocabulary by providing large amounts of authentic language data (or example sentences). It has received attention in the field of second language (L2) acquisition research because it fits well with current learner-centered approaches, where learners are enabled to raise and explore their own linguistic inquiries. However, it may not be equally effective for individual learners due to cognitive factors such as L2 proficiency, working memory, and learning strategies, which may contribute to the degree of their success in L2 learning. The present study examines the roles of these individual differences in L2 vocabulary acquisition and retention. We hypothesize that L2 learners use strategies specifically for DDL activities when they tackle the meaning of unknown L2 vocabulary in the assigned DDL task. We discover that L2 learners use DDL-specific strategies when they are asked to explore the meaning of new L2 vocabulary in the assigned DDL task. Also, we confirm that L2 vocabulary proficiency, working memory, and DDL-specific strategies all influence their level of vocabulary acquisition and retention.

What the researchers did

- We recruited 35 undergraduate-level Korean EFL students whose English proficiency was about intermediate to high-intermediate level.
- They were also tested on their working memory capacity, general L2 vocabulary knowledge (L2 vocabulary proficiency), and knowledge about the target vocabulary prior to the main task.
- To examine learners' use of any DDL-specific strategies, the participants were instructed on how to verbalize their thinking when they tackle the target DDL-task in which the participants were given a 475-word passage including 9 target vocabulary. The five example sentences including each target vocabulary were given on a separate sheet for the participants to infer the meaning of the target vocabulary on their own. Their task performance was video-recorded.
- The participants were given a test of the target vocabulary immediately after the DDL-task, and also after two weeks from the task.

What the researchers found

- The participants used DDL-specific strategies when they attempted to infer the meaning of unknown L2 vocabulary with several example sentences. In particular, they read multiple example sentences to infer the word meaning while judging the difficulties or relevancies of the given sentences or revisited example sentences to check or confirm previous inferences.
- The participants' strategy use, working memory capacity, and general L2 vocabulary proficiency all contributed to the amount of learning of unknown L2 vocabulary through the target DDL-task.

Things to consider

- Cognitive factors, such as working memory capacity, L2 vocabulary proficiency and learners' strategy use, had been suggested to influence L2 learning in the DDL-task in the previous literature. In this study, it was verified that these factors had a positive impact on L2 learning in significant ways.
- L2 teachers are encouraged to teach DDL-specific strategies found in this study, which may help learners to perform better in the DDL-task, and gain a greater amount of vocabulary knowledge.
- Training for working memory is also recommended, but more research is needed to find a causal relationship between the amount of training and the level of increase in working memory.
- More research on other learner factors such as motivation and learning styles and how they influence L2 learning through the DDL-task along with other variables examined in this study is needed.

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