

学位論文の要旨

論文題目 Exploring the Role of Vocabulary in Writing: Predicting Lexical  
Diversity Scores, Differentiating Writing Proficiency, and  
Investigating Vocabulary Knowledge Development Over Time  
氏名 Yajie Li

This dissertation investigates the role of vocabulary knowledge in L2 writing: the extent to which vocabulary knowledge scores can predict vocabulary use in writing activities for participants with different proficiency levels; how vocabulary knowledge scores can distinguish participant writing scores; and to what extent vocabulary knowledge scores and written production can track acquired vocabulary knowledge. To explore these questions, I conducted four experiments (three cross-sectional and one longitudinal) and distributed a range of vocabulary tasks to help determine participants' vocabulary knowledge. Nation's framework of vocabulary knowledge (1990, 2001, 2013) divides vocabulary knowledge into receptive and productive dimensions. Receptive vocabulary knowledge requires participants to understand the form and meaning of words, and productive vocabulary knowledge demands participants to produce words. We can use vocabulary tasks as effective tools to test participants' vocabulary knowledge. Lexical diversity is one such effective tool to measure the variety of different words used in actual written texts or spoken production. By using lexical diversity measurements, it is possible to estimate

vocabulary knowledge in writing use, writing competence, and overall language proficiency levels (e.g., Engber, 1995; Lu, 2012; Olinghouse & Leaird, 2009; Olinghouse & Wilson, 2013; Treffers-Daller, 2013; Treffers-Daller et al., 2018; Vidal & Jarvis, 2020; Yu, 2010).

The first experimental chapter partially replicates Treffers-Daller et al. (2018) and explores potential relationships between vocabulary tasks and L2 written production for participants at the Common European Framework of Reference (CEFR) A2 level (Council of Europe, 2001). It examines whether vocabulary scores can predict participants' vocabulary in writing use with 29 L1 Chinese participants. I gave participants four vocabulary knowledge tasks: Lex30, a task based on word association (Meara & Fitzpatrick, 2000); G\_Lex, a single-word gap-fill task (Fitzpatrick & Clenton, 2017); the Productive Vocabulary Levels Test (the PVLТ), a sentence completion task (Laufer & Nation, 1999); the Vocabulary Levels Test (the VLT), a form-meaning matching task (Nation, 1983; Schmitt, 2000) assessing receptive vocabulary knowledge; and one writing topic (see Appendix A for specific examples of Lex30, G\_Lex, the PVLТ, the VLT, and writing topic).

The second experimental chapter focuses on productive vocabulary knowledge tasks and investigates potential relationships between productive vocabulary tasks

and L2 written production for participants at CEFR levels B1 to C1. This experiment examines 91 L1 Japanese participants with higher proficiency levels. Considering that writing is a productive skill and that the PVLТ task also accesses facets of receptive vocabulary knowledge (Edmonds et al., 2022; Webb, 2008), I gave participants three productive vocabulary tasks (Lex30, G\_Lex, the PVLТ) and one IELTS writing topic (see Appendix B for sample responses of Lex30, G\_Lex, the PVLТ, and IELTS writing).

The third experimental chapter examines how productive vocabulary tasks can differentiate between IELTS writing scores. 63 L1 Japanese speakers and 35 L1 French speakers participated in this experiment. All participants finished the three productive vocabulary tasks (Lex30, G\_Lex, and the PVLТ) and two IELTS writing topics (see Appendix E for sample responses of Lex30, G\_Lex, the PVLТ, and IELTS writing). Qualified IELTS raters marked all the writing samples based on the IELTS writing rubric (see Appendix C for IELTS writing band descriptors). I divided all participants from the two different language backgrounds into different proficiency groups based on their IELTS writing scores.

The fourth experimental chapter explores how productive vocabulary knowledge task scores and lexical diversity measure scores relate over a short study period. It investigates whether participants' vocabulary knowledge and lexical

diversity scores can improve through a pre- and post-test design over a short-term intervention (approximately 12 weeks). Participants from a single language background (L1 Japanese participants, N=51) with similar proficiency levels joined the current experiment. I used two versions of three productive vocabulary knowledge tasks (Lex30, G\_Lex, and the PVLТ) and two IELTS writing topics (with different question prompts at each test time) at the beginning and the end of the study period (see Appendix F for sample responses of vocabulary tasks and IELTS writing at testing time one and testing time two). I gave all participants the same vocabulary lists (2K New General Service List [NGSL]) to learn.

In a partial replication of Treffers-Daller et al.'s (2018) study, I use the lemma, which comprises 'a headword and its inflected forms' (Nation, 2016, 2022), as word unit both for responses from vocabulary tasks and writing samples in my first experiment. A research gap in Treffers-Daller et al.'s study left using the flemma, which comprises 'a headword and inflected forms of different parts of speech' (Nation, 2016, 2022) as a word unit unexplored, I have used the flemma as a word counting unit for my second, third, and fourth experiments.

The findings from the four experimental chapters raise several key issues to discuss and explore further: (i) disparities in accessing vocabulary knowledge used in

written production, as evidenced by vocabulary knowledge measures: vocabulary knowledge measures differ in task features and task embeddedness; (ii) measuring vocabulary knowledge can differentiate levels of proficiency in IELTS writing; (iii) selecting appropriate measures of lexical diversity depends on the specific research question or goal, as different measures may have different strengths and limitations. Traditional lexical diversity measure scores show greater accuracy with vocabulary knowledge scores in writing use, whereas the more recently devised lexical diversity measures show better performance in tracking vocabulary knowledge development in written production; (iv) G\_Lex shows greater power in tracking vocabulary knowledge improvement than the PVLIT and Lex30; and, (v) using online flashcards learning with 2K NGSL lemma-based word lists offers an effective means to improve vocabulary knowledge and vocabulary in writing use.

In conclusion, I hope the issues identified and investigated regarding the dynamic relationship between vocabulary knowledge and written production can support future research. The findings' implications are significant for L2 writing class and vocabulary knowledge assessment.