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研究課題名（和文）Investigating Potential Relationships between Vocabulary Knowledge and Writing

研究課題名（英文）Investigating Potential Relationships between Vocabulary Knowledge and Writing

研究代表者
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研究成果の概要（和文）：当研究は、語彙知識がL2ライティングに与える影響について重要な洞察を与える。本研究では、4つの実験（3つの横断的実験と1つの縦断的実験）が含まれ、様々な語彙タスクを使用した。その結果、以下の語彙知識評価の3つの主要な領域が明らかになった。それらは、１）語彙知識スコアが、様々な習熟度の参加者のライティング課題における語彙の使用状況をどの程度予測できるか、２）語彙知識スコアが参加者のライティングスコアにどのような差異を生じさせるか、３）語彙知識スコアとライティングアウトプットとの関係が語彙習得の追跡にどのように影響するか、である。

研究成果の学術的意義や社会的意義
The results of our study emphasize the dynamic relationship between vocabulary knowledge and written production. The implications of the findings, which are significant for L2 writing instruction and vocabulary knowledge assessment, provide a strong foundation for future research.

研究成果の概要（英文）：Our research provides important insights into the impact of vocabulary knowledge on L2 writing. The study included four experiments (three cross-sectional and one longitudinal) and employed a variety of vocabulary tasks. The findings shed light on three main areas of vocabulary knowledge assessment: (1) the extent to which vocabulary knowledge scores can forecast vocabulary usage in writing tasks among participants with varying proficiency levels; (2) how these scores can differentiate participant writing scores; and (3) the relationship between vocabulary knowledge scores and written output in tracking vocabulary acquisition.

研究分野：Applied linguistics

キーワード：Writing　Vocabulary knowledge　Lexical diversity　Vocabulary tasks　IELTS

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１．研究開始当初の背景

Vocabulary knowledge is an important component for high-stakes language exams (e.g., IELTS), language skills, language acquisition, and determination of language proficiency (e.g., the CEFR framework). Based on previous research showing that vocabulary scores can predict writing levels and general proficiency levels, the focus of this project was on the relationship between vocabulary knowledge and writing. Following previous studies, we used multiple vocabulary measures to assess vocabulary knowledge.

２．研究の目的

The purpose of the project was to examine the impact of vocabulary knowledge on L2 writing, focusing on three main areas: (1) the extent to which vocabulary knowledge scores can predict vocabulary usage in writing tasks among participants with varying proficiency levels; (2) how these scores can differentiate participant writing scores, and (3) the relationship between vocabulary knowledge scores and written output in tracking vocabulary acquisition. To address the goals outlined in the previous section, our study included four experiments (three cross-sectional and one longitudinal) and employed a variety of vocabulary tasks.

３．研究の方法

An important consideration was the difference between receptive and productive vocabulary knowledge. Receptive vocabulary knowledge involves understanding the form and meaning of words, while productive vocabulary knowledge involves the ability to produce words. Vocabulary tasks are utilized as effective tools to assess participants' vocabulary knowledge. Measures of lexical diversity provide an additional method for evaluating the range of different words used in written texts or spoken language. By applying lexical diversity measurements, we had a means of estimating vocabulary knowledge in terms of writing usage, writing proficiency, and overall language proficiency levels.

Experimental Study 1

We began the project with a replication of Treffers-Daller et al. (2018), which investigated potential connections between vocabulary tasks and L2 written production for participants at the A2 level of the Common European Framework of Reference, CEFR (Council of Europe, 2001). We wanted to explore whether vocabulary scores can predict participants' vocabulary use in writing, using data from 29 speakers of Chinese as a first language (L1). Participants completed four vocabulary knowledge tasks and one IELTS writing prompt. The tasks included Lex30, a word association task; G_Lex, a single-word gap-fill task; the Productive Vocabulary Levels Test (PVLT), a sentence completion task; and the Vocabulary Levels Test (VLT), which assesses receptive vocabulary knowledge through form-meaning matching.

Experimental Study 2

Our focus then shifted to productive vocabulary knowledge tasks, exploring their potential relationships with L2 written production for participants at CEFR levels B1 to C1. This study examined 91 L1 Japanese speakers with higher proficiency levels than those in the first experiment.

Experimental Study 3

The next stage of the project was to examine how productive vocabulary tasks can differentiate IELTS writing scores. This involved 63 L1 Japanese speakers and 35 L1 French speakers. Qualified IELTS raters evaluated all writing samples using the IELTS writing rubric.

Experimental Study 4

In the final study, we examined the relationship between productive vocabulary knowledge task scores and lexical diversity measure scores over a short study period. Our aim was to evaluate whether participants' vocabulary knowledge and lexical diversity scores improve through a pre- and post-test design over approximately 12 weeks. This experiment included 51 L1 Japanese speakers with similar proficiency levels.

４．研究成果

Experimental Study 1

The results in the first experimental study suggest that the three productive vocabulary knowledge tasks cannot predict IELTS writing scores. One explanation of this is that writing entails complex and comprehensive lexical knowledge. Low-level participants have limited vocabulary knowledge and lack the ability to put what vocabulary knowledge they do have into their IELTS writing.

Experimental Study 2

The findings of experimental study 2 suggest that the three productive vocabulary knowledge tasks can indeed predict IELTS writing scores to varying degrees. The correlation values in the study were stronger than those presented in Treffers-Daller et al. (2018), especially the performance of G_Lex and the PVLT task.

Experimental Study 3

The results reported in this study show that all three productive vocabulary knowledge tasks can differentiate between IELTS writing scores, which suggests that participants with higher IELTS writing scores have acquired more productive vocabulary knowledge than participants with lower IELTS writing scores. The implication is that increasing one’s productive vocabulary knowledge might be an effective way to achieve a higher IELTS writing score.

Experimental Study 4

The results of this experiment show that all lexical diversity measures and one productive vocabulary knowledge task (G_Lex) appear to indicate vocabulary knowledge growth for the L1 Japanese participants.

Summary of Findings

The findings from these four studies highlight several key issues for further discussion and exploration: (1) the varying access to vocabulary knowledge used in written production as indicated by different vocabulary knowledge measures; (2) the ability of vocabulary knowledge measures to differentiate proficiency levels in IELTS writing; (3) the selection of appropriate lexical diversity measures based on specific research questions or goals, noting that different measures have different strengths and limitations; (4) the G_Lex task's superior ability to track vocabulary knowledge improvement compared to the PVLT and Lex30; and (5) the effectiveness of using online flashcards with 2K NGSL lemma-based word lists to enhance vocabulary knowledge and vocabulary use in writing.

The results of our study emphasize the dynamic relationship between vocabulary knowledge and written production, providing a basis for future research. The implications of the findings are significant for L2 writing instruction and vocabulary knowledge assessment. We have received positive feedback on our work at international conferences, and from a leading journal in the field. We are currently in the process of resubmitting the manuscript to a different but equally high impact journal.

５．主な発表論文等

〔雑誌論文〕　計4件（うち査読付論文　3件／うち国際共著　0件／うちオープンアクセス　0件）

１．著者名 Yajie Li, Simon Fraser, Jon Clenton	４．巻 26
２．論文標題 A Review of McLean's Evidence for the Adoption of the Flemma as an Appropriate Word Counting Unit	５．発行年 2023年
３．雑誌名 Hiroshima Studies in Language and Language Education	６．最初と最後の頁 26-79
掲載論文のDOI（デジタルオブジェクト識別子） 10.15027/53521	査読の有無 有
オープンアクセス オープンアクセスではない、又はオープンアクセスが困難	国際共著 －

１．著者名 Julia Tanabe, Walter Davies, Simon Fraser	４．巻 26
２．論文標題 Peer Commenting on Written Assignments for a Japanese University Online English Course	５．発行年 2023年
３．雑誌名 Hiroshima Studies in Language and Language Education	６．最初と最後の頁 26-45
掲載論文のDOI（デジタルオブジェクト識別子） 10.15027/53519	査読の有無 有
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１．著者名 Dion Clingwall	４．巻 26
２．論文標題 A Review and Evaluation of Suzuki and Kormos’ Investigation into the Link between Cognitive and Utterance Fluency: The Multidimensionality of Second Language Oral Fluency	５．発行年 2023年
３．雑誌名 Hiroshima Studies in Language and Language Education	６．最初と最後の頁 93-104
掲載論文のDOI（デジタルオブジェクト識別子） 10.15027/53522	査読の有無 有
オープンアクセス オープンアクセスではない、又はオープンアクセスが困難	国際共著 －

１．著者名 Yajie Li, Simon Fraser, Jon Clenton	４．巻 25
２．論文標題 Evaluating Jarvis and Hashimoto's Operationalizations of Word Types and Their Influence on Lexical Diversity Measures	５．発行年 2022年
３．雑誌名 Hiroshima Studies in Language and Language Education	６．最初と最後の頁 109-120
掲載論文のDOI（デジタルオブジェクト識別子） 10.15027/51964	査読の有無 無
オープンアクセス オープンアクセスではない、又はオープンアクセスが困難	国際共著 －

〔学会発表〕　計6件（うち招待講演　1件／うち国際学会　1件）

1．発表者名
Yajie Li, Jon Clenton, Simon Fraser

2．発表標題
Using productive vocabulary knowledge and lexical diversity measures to predict different IELTS writing task scores

3．学会等名
EuroSLA 30, University of Barcelona, Spain

4．発表年
2021年

1．発表者名
Yajie Li, Jon Clenton, Simon Fraser

2．発表標題
Can productive vocabulary knowledge measures predict IELTS writing proficiency?

3．学会等名
L2 Writing Seminar, University of Murcia, Spain

4．発表年
2021年

1．発表者名
Yajie Li, Jon Clenton, Simon Fraser

2．発表標題
Can productive vocabulary knowledge measures predict IELTS writing proficiency?

3．学会等名
HLRF 2021 (Hiroshima Lexical Research Forum), Hiroshima University

4．発表年
2021年

1．発表者名
Yajie Li, Jon Clenton, Simon Fraser

2．発表標題
Do vocabulary task measures predict objective or subjective writing scores?

3．学会等名
H-VARG (Hiroshima Vocabulary Acquisition Research Group), Hiroshima University（招待講演）

4．発表年
2020年

１．発表者名 Yajie Li, Jon Clenton, Simon Fraser
２．発表標題 Can productive vocabulary knowledge measures predict IELTS writing proficiency?
３．学会等名 L2WR Seminar, University of Murcia, Spain（国際学会）
４．発表年 2021年

１．発表者名 Yajie Li, Jon Clenton, Simon Fraser, George Higginbotham
２．発表標題 Can productive vocabulary measures predict L2 written proficiency?
３．学会等名 Vocab@Vic Conference, University of Victoria, Wellington, New Zealand
４．発表年 2023年

〔図書〕　計0件

〔産業財産権〕

〔その他〕

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６．研究組織

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７．科研費を使用して開催した国際研究集会

〔国際研究集会〕　計0件

８．本研究に関連して実施した国際共同研究の実施状況

共同研究相手国	相手方研究機関