

University of Mississippi

eGrove

Electronic Theses and Dissertations

Graduate School

1-1-2021

The Current Treatment of English Phrasal Verbs in MEXT-authorized textbooks for Japanese Junior High School Students

Natsuko Yamada

University of Mississippi

Follow this and additional works at: <https://egrove.olemiss.edu/etd>

Recommended Citation

Yamada, Natsuko, "The Current Treatment of English Phrasal Verbs in MEXT-authorized textbooks for Japanese Junior High School Students" (2021). *Electronic Theses and Dissertations*. 2078.

<https://egrove.olemiss.edu/etd/2078>

This Thesis is brought to you for free and open access by the Graduate School at eGrove. It has been accepted for inclusion in Electronic Theses and Dissertations by an authorized administrator of eGrove. For more information, please contact egrove@olemiss.edu.

THE CURRENT TREATMENT OF ENGLISH PHRASAL VERBS IN MEXT-
AUTHORIZED TEXTBOOKS FOR JAPANESE JUNIOR HIGH SCHOOL STUDENTS

A Thesis

presented in partial fulfilment of requirements
for the degree of Master of Arts
in the Department of Modern Languages
The University of Mississippi

by

NATSUKO YAMADA

May 2021

Copyright © 2021 by Natsuko Yamada
ALL RIGHTS RESERVED

ABSTRACT

This comparative analysis, focusing on the 150 highest-frequency phrasal verbs in the phrasal verb pedagogical list (Garnier and Schmitt, 2015), highlights the limited occurrence across English language textbooks for Japanese junior high school. The spoken and written data of Japanese learners of English (i.e., NICT-JLE and NICE) shows considerable differences in the usage patterns of phrasal verbs compared to native English speakers. These results indicated that Japanese learners' underdeveloped productive knowledge of phrasal verbs could cause intelligibility problems with native speakers especially in oral communication. In order to overcome the semantic and phonological complexity of phrasal verbs, and to break away from one-word verb dependence, the textbook authors should distinguish spoken grammar from written grammar, and focus more on word frequency data based on large-scale corpora. The well-balanced word inputs from the textbooks would fully support the users' healthy language development without avoiding useful words for real-life English speaking.

DEDICATION

This thesis is dedicated to the individual students I have ever encountered in my teaching career; they are powerful sources of motivation for me to continue learning and growing.

Let's go beyond textbooks and expand our knowledge!

ACKNOWLEDGMENTS

I would like to express my sincere appreciation to my advisor, Dr. Tamara Warhol, as well as my committee members, Dr. Vance Schaefer and Dr. Larissa Warhol for providing me the opportunity and support to complete my research project.

This project would not have been possible without the expert guidance of Dr. Daniel Valle on my corpus data analysis. I would also like to extend my deepest gratitude to Dr. Akamatsu Nobuhiko, who encouraged me to go back to campus and continue to broaden my knowledge.

Finally, I am extremely grateful for my family, friends and former colleagues, who were supporting me throughout challenging times in my academic journey.

TABLE OF CONTENTS

ABSTRACT.....	ii
DEDICATION.....	iii
ACKNOWLEDGEMENTS.....	iv
LIST OF TABLES.....	vi
LIST OF FIGURES.....	viii
CHAPTER I: INTRODUCTION.....	1
CHAPTER II: LITERATURE REVIEW.....	3
CHAPTER III: METHODOLOGY.....	18
CHAPTER IV: RESULTS AND DISCUSSION.....	25
CHAPTER V: CONCLUSION.....	48
REFERENCES.....	50
VITA.....	53

LIST OF TABLES

1.1 Total and Section Score Means of Japanese Test-takers	10
2.1 Excerpts from the interviewees' utterance files 00512 and 00018 with the original discourse tags in the NICT JLE CorpusTOEFL iBT	22
3.1 An excerpt from the NICE corpus data file (Japanese (JPN) 134) with native speakers' corrected sentences (%NTV) and optional comments (%COM).....	24
4.1 Number of tokens and types per MEXT-authorized English textbooks	26
4.2 Distribution of lexical verbs in MEXT-authorized English textbooks	26
4.3 Frequency distribution of lexical verbs (LVs) in MEXT-authorized English textbooks...	27
5.1 Number of hits for each high-frequency phrasal verbs in the most recent MEXT- authorized English textbooks (2016 editions)	29
5.2 Occurrence of phrasal verbs ranking outside the PHaVE list's top 150 in the most recent MEXT-authorized English textbooks (2016 editions)	31
6.1 Comparison of the number of hits for each high-frequency phrasal verb between two different editions of Sunshine English Textbook series	34
6.2 Occurrence of phrasal verbs ranking outside the PHaVE list's top 150 in two different editions of Sunshine English Textbook series	36
7.1 Total number of phrasal verbs in each MEXT-authorized English textbook	38
8.1 Number of tokens and types in NICT-JLE spoken sub-corpora.....	39
8.2 Distribution of lexical verbs in NICT-JLE spoken sub-corpora.....	39
8.3 Comparison of the total number of hits for 150 high-frequency phrasal verbs between the two NICT-JLE spoken sub-corpora	40

9.1 Comparison of the top 10 high-frequency phrasal verbs in the NICT-JLE spoken sub-corpora	42
10.1 Number of tokens and types in NICE written sub-corpora.....	43
10.2 Distribution of lexical verbs in NICE written sub-corpora.....	44
10.3 Comparison of the total number of hits for 150 high-frequency phrasal verbs between the two NICE written sub-corpora.....	44
11.1 Comparison of the top 10 high-frequency phrasal verbs in the NICE written sub-corpora	46

LIST OF FIGURES

1.1 The 2017 MEXT Survey on Junior High School Students' purposes of learning English	13
1.2 The Percentage of junior high school students achieving the CEFR A1 Level in the 2019 MEXT survey.....	14
2.1 A screenshot of a Jupyter notebook showing python code examples and outputs of the lemmatization process.....	20

CHAPTER I

INTRODUCTION

Recent corpus-based research has revealed that a surprising number of phrasal verbs, which are defined as a verb combined with an adverb or a preposition (e.g., “win over” and “go in for”) to give a new meaning in Oxford Advanced Learner's Dictionary (1995), are used by native English speakers in various types of communication (Gardner & Mark, 2007; Liu, 2011; Garnier & Schmitt, 2015). The inherent syntactic and semantic complexities of phrasal verbs place a heavy learning burden on non-native English speakers, especially those whose first languages do not have such grammatical structure (e.g., Finnish, Japanese, and Russian). In the field of teaching of English as a foreign language, teachers and materials writers have become more aware of the importance of teaching phrasal verbs as essential elements of daily native English communication. Despite the growing attention to phrasal verbs in English language education, it still cannot be said that students, who are struggling with memorizing countless verb-preposition combinations, receive sufficient opportunities to learn more useful phrasal verbs to develop students’ authentic communication skills, especially their oral interactional competence. Many English textbook-analysis studies uncovered the disappointing reality of vocabulary selection based on the writers’ uncertain intuition, not on the corpus-driven frequency lists (Koprowski, 2005; Mcaleese, 2013). This irresponsible choice of words not only betrays learners’ trust in their textbooks but also deprives them of the chance to achieve native-like fluency.

In Japan, which is geographically, ethnically, and linguistically isolated from the rest of the world, textbooks have played a dominant role in English language teaching and learning. Japanese publishers create primary and secondary textbooks in all subject areas, including

English language, by following the national curriculum guidelines. The Ministry of Education, Culture, Science and Technology (MEXT) screens the revised editions of school textbooks every four years. This study attempted to examine whether the authorized textbooks have been revised to track the goal of English education in Japan, which strictly emphasizes improving students' oral communication skills, by measuring the frequency and range of the phrasal verbs as key elements of English communication.

CHAPTER II

LITERATURE REVIEW

1. The Vitality of Phrasal Verbs to Native Speakers of English

Over 6,000 common English phrasal verbs are collected in the Oxford Phrasal Verbs Dictionary. As the large number indicates, phrasal verbs play an essential role in English communication. Since multi-word chunks have been considered extremely common in casual conversation, there seems to be an unspoken agreement to replace phrasal verbs with one-word alternatives in formal written contexts. One brief quotation from Croft's (1990) scholarly article, for example, exhibited his consistent preference for using single-word verbs; he used only one formal phrasal verb "adhere to" out of eighty words. Yet, the Corpus of Contemporary American English (COCA), collecting over 520 million words across multiple genres, identified a large proportion of phrasal verbs in written discourses such as fiction, magazines, and newspapers (Abdul Rahman and Abid, 2014). In current formal academic writing such as linguistics, phrasal verbs are becoming more acceptable, although their actual usage is still relatively restricted in meaning (Alangari, Jaworska, & Laws, 2020). Gardner and Davis (2007) found 518,923 two- and three- word phrasal verbs (verb and adverbial-particle combinations) occurrences in the British National Corpus (BNC), an online mega-corpus data-base (over 100 million words) of British spoken and written English language. This means that English learners will encounter at least one phrasal verb in every 192 words. The National Center for Voice and Speech (NCVS) reported that the average speech rate for native English speakers in the United States is about 150 words per minute, so a reasonably high occurrence of English phrasal verbs can be expected even in short conversations. According to the eight corpus-based frequency bands from 8 (most common words) to 1 (extremely rare words) of the Oxford

English Dictionary – where each word is assigned a band by calculating the mean of its frequency distribution found for individual decades from 1970 to the present day — phrasal verbs can be labelled as Band 7. Also, they include the main semantic words which occur between 100 and 1000 times per million words in ordinary speech and writing (e.g., man, hand, year, animal, thing, two, large, and good). Given their prevalence, the fluent use of phrasal verbs can be assumed to be of importance for people learning English as a foreign language (EFL) to achieve native-like proficiency in their speech. “Don’t use big words;” this was an unexpected response which one Japanese EFL student received from his American roommate. This phrase demonstrates that native English speakers may prefer to use simpler words such as phrasal verbs than one-word substitutions in their everyday conversation (e.g., turn down /reject). Even in federal government writing, the plain English movement was applied during the Clinton presidency, and the number of Latin-based longer and fancier terms were replaced by the shorter and easier Anglo-Saxon origin equivalents (Thrush, 2001). The Securities and Exchange Commission (SEC) in the United States also issued a handbook on how to produce Plain English; for example, it recommended using “join in” instead of “participate.” Thus, non-native speakers are not trying to fancy themselves wordsmiths, but they often face difficulty in recognizing the differences in register and style of the target language. Siyanova and Schmitt’s (2007) questionnaire study found that even advanced learners who had received longer exposure to English-speaking environments did not show a native-like strong preference to use multi-word verbs. Non-native speakers actually have good cause for choosing risky single-word verbs, which can sound stilted in a casual English conversation.

2. The Avoidance of Phrasal Verbs by Non-native Speakers of English

Contrary to native English speakers’ preferred usage, studies have revealed the avoidance of producing phrasal verbs among non-native speakers (e.g., You, 1999; Liao and

Fukuya, 2004; Siyanova and Schmitt, 2007). According to Kleinmann's (1977) definition, an avoidance behavior is one of the strategies that an EFL learner resorts to when they perceive that it is difficult to produce a term or phrase with their knowledge of a target language. However, the strategy of avoiding unfamiliar phrasal verbs brings about the opposite of the desired effect of keeping communication running smoothly and instead unintentionally gives an explicit stigmatizing mark of foreignness. In Liao & Fukuya's (2004) verb elicitation test conducted with Chinese graduate students at the University of Hawaii, the advanced EFL learners produced phrasal verbs significantly more than the intermediate learners, who preferred to use their more familiar one-word verbs due to the confusing semantic function of each English particle. Despite the native-like performance, advanced EFL learners still showed a slight tendency to use fewer figurative phrasal verbs than native speakers. You (1999) compared the performance of three groups of Korean EFL learners with different linguistic backgrounds and lengths of stay in the United States, and found that the level of exposure to the natural language environment was related to the avoidance patterns of phrasal verbs. Even though the high exposure to spoken English increased the frequency of phrasal-verb use, their quantity and quality of phrasal-verb use were completely different from native speakers'. In the previously mentioned study (Siyanova and Schmitt, 2007), EFL learners with the experience of studying in the UK, whose first language (L1) does not have verb-particle (preposition or adverb) compounds like the Germanic language groups (e.g., Arabic, Russian, and Italian), exhibited their rising preference for multi-word verbs according to the increase of input/output opportunities in natural environmental contexts. In fact, however, they could not delete their stronger preferences for one-word verbs in contrast with native English speakers. From these research findings, it seems to be extremely difficult for non-native speakers to become completely familiar with using the alien structure of phrasal verbs that does not exist in the first language even when spending the sufficient amount of time in the target-language

input environments. Hulstijn and Marchena's (1989) study, however, revealed that Dutch intermediate learners of English, whose mother tongue has phrasal verb constructions, intentionally chose one-word verbs instead of specific phrasal verbs, which were perceived as too Dutch-like due to the lack of semantic contrasts between the native and target languages (e.g., "opgeven" in Dutch with the meaning similar to "give up"). This unexpected result suggested that target language avoidance did result from not only structural differences but also semantic similarities between two languages. Regardless whether non-native English speakers have phrasal verbs in their first language or not, most of them, including advanced level learners, actually realized the complexity of syntactic and semantic features of phrasal verbs and decided to adopt the risk avoidance strategy to ensure smooth communication (Hulstijn and Marchena, 1989; Garnier and Schmitt, 2016).

3. The Cognitive Semantic Approach to Learning English Phrasal Verbs

The acquisition of English phrasal verbs is notoriously challenging for EFL learners due to their diverse forms and meanings. Many phrasal verbs have both optional and obligatory word orders. Transitive phrasal verbs can be separable, and nouns or pronouns can be inserted between the verb and the particle (e.g., turn off the TV, turn the TV off). Each particular verb-particle combination ties to a unique meaning, which learners cannot easily guess from the meaning of individual word parts. That is, numerous verb-particle combinations create countless unexpected and abstract meanings. Garnier and Schmitt (2015) explained the polysemous character of phrasal verbs by providing clear example sentences of the combination "go on," which has 22 meaning sense entries in the Collins COBUILD Phrasal Verbs Dictionary (3rd edition, 2012). These complex form-meaning relations certainly increase both the learning and teaching burden of English phrasal verbs. It is thus understandable that

non-native English speakers tend to show dependencies on more familiar one-word verbs with coherent and complete meanings.

In addition to the limitless verb-particle combinations, Nieda (2006) pointed out the phonological feature structure linking the final consonant sound of a one-syllable verb into the initial vowel of a particle, which sounds shorter than a single-word verb and gives vibrant impressions in speech (e.g., put [pʊt] + on [ɒn] → put on [pʊtən]). These tricky connected speech sounds could be another concern for non-native listeners to identify each constituent part. The only learnable aspect of English phrasal verbs is the two structural constituents formed by combinations of simple Germanic monosyllabic action verbs and spatial particles, of which even complete beginner students are already familiar with the meaning (Dixon, 1991 and Nieda, 2016). Along with developing phonological awareness, creating cognitive images of each component part from the very early stages of English learning is needed to create a great shortcut for learners who must spend time and effort on deciphering multiple meanings of each verb-particle combination.

Yasuda's study (2010) emphasizes the importance of the cognitive image schema, especially explicit metaphorical awareness of the particles, which had much to do with spatial orientations derived from the human-body experiences, such as "up-down," "front-back," and "on-off." The comparison between cognitive and traditional instructional approaches was conducted with Japanese EFL undergraduate students under the same class conditions. The results were definitive. The experimental student group with explicit instructions about the metaphorical meanings of the particles performed significantly better than the control group with traditional translating training in the post-test task where participants had to choose the correct particle from the options to fill in the blanks. The experimental group members were also able to transfer their metaphorical word knowledge to the task by shifting their attention from memory retrieval to the orientational metaphors when they met the phrasal verbs which

they were not exposed to during the cognitive-based learning program. This result demonstrates that enhancing awareness of conceptual metaphors of the spatial adverbial particle contributes to the meaning of the whole string rather than simply translating. At the same time, this conceptual awareness developed learners' metalinguistic knowledge, which facilitates the figuring out and producing of novel phrasal verbs. Although Yasuda (2010) mentioned a concern about the possible effect of metaphoric knowledge which participants already established before the comparative study, it cannot be denied that directing EFL learners' attention to the orientational meanings embedded in the adverbial particles is a more effective way of guessing various meanings of phrasal verbs than encouraging mere memorization. Furthermore, some non-Germanic group languages, such as Chinese and Korean, have different types of compound verbs (e.g., verb-verb combinations), which contain lexical functions of individual components which correspond to those of English phrasal-verb constructions. The positive language transfer of L1 word knowledge can facilitate understanding the metaphoric meanings of the component parts of phrasal verbs.

Laurence (2018) describes how Japanese native speakers' knowledge of verb-verb compound words could assist them to understand semantic functions of English phrasal verbs. For example, Japanese verbs, *agaru* "rise" and *ageru* "raise," can be combined with multiple main verbs and cover a wide range of meanings. The semantic roles of these verbs are quite similar to the English particle "up," which has the strict core definition referring to the spatial upward movement. Sometimes, however, phrasal verbs containing the particle "up" failed to correspond to the more flexible Japanese compound verbs. Although there is no exact match between two different types of compound words, EFL learners' existing conceptual knowledge will prompt capturing metaphors related to the various definitions of verb-particle combinations. Teaching materials also should highlight the role of conceptual metaphor awareness in coping with the challenging characteristics of English phrasal verbs.

4. The Corpus-based Approach to Learning English Phrasal Verbs

Even with the effectiveness of cognitive approaches to teaching phrasal verbs, non-native English speakers still feel at a loss when faced with the infinite verb-particle combinations. In order to answer the “where-should-we-start” question and substantially reduce the burden of phrasal-verb acquisition, current corpus-based studies shed light on the frequency of phrasal-verb use in both spoken and written English. These corpus-based research studies narrow the scope of phrasal verbs in English language learning based on frequencies of their actual appearance in a large representative corpus such as the BNC, which contains approximately 4000 text samples from the widest range of linguistic productions. Gardner and Davis (2007) consulted the BNC’s 100-million-word database to create a list of the most frequent verb-particle combinations which have relatively high impact on the English language as a whole. For their study, they created a more functional and objective definition of phrasal verbs and focused solely on a lexical verb followed by an adverbial particle. Under this rigorous structural criterion, it was revealed that 20 lexical verbs and 16 adverbial particles formed the 100 most frequent verb-particle combinations, which covered more than one half of all phrasal verbs that appeared in the BNC. Following Gardner and Davis’s investigative work, Liu (2011) compared the frequency ranking order of phrasal verbs in the COCA with the rank based on BNC, and presented a more comprehensive list of the 150 most common phrasal-verb constructions used in both American and British English. Garnier and Schmitt (2015) agreed on the value of establishing pedagogical frequency lists of phrasal verbs, but pointed out that these two previous corpus-based studies did not consider the polysemous nature of phrasal verbs. The PHrasal VERb Pedagogical List (PHaVE List) was created in order to give teaching practitioners more manageable semantic information, and all of its 150 items have key meaning senses covering at least 75% of the occurrences in the COCA regularly upgraded with new data. This frequency ranking list must be utilized by teachers, materials developers, and test

designers who need to prioritize what phrasal verbs to use for effective language learning. Both researchers and educators should focus more energy on narrowing down the broad range of phrasal-verb usage patterns and meanings to encourage language learners of all levels to master these ubiquitous word items in English conversation.

5. The Phrasal Verbs to Determine the Value of English Textbooks in Japan

For approximately 150 years of English language education in Japan, the MEXT has continued to reform the curricula repeatedly in order to improve Japanese students' English communication skills. They have increased the number of Assistant Language Teachers (ALTs) as well as minimum class hours. Nevertheless, Japanese students have continued to score poorly on standardized tests of English. Every year, the Educational Testing Service (ETS) releases a summary report on average total score for Test of English as a Foreign Language internet-based test (TOEFL iBT) depending on the test takers' countries of origin. In spite of these education reform efforts, Japan ranked the third worst place out of 35 Asian countries for four years in a row (Table 1.1). Moreover, Japanese learners have been designated as the country with the lowest level of oral English proficiency in Asia.

Table 1. 1

TOEFL iBT Total and Section Score Means of Japanese Test-takers

Test year	Asia rank	Reading	Listening	Speaking	Writing	Total
2016	28/31	18	17	17	19	71
2017	27/29	18	18	17	18	71
2018	27/29	18	18	17	18	71
2019	27/29	18	18	17	18	72

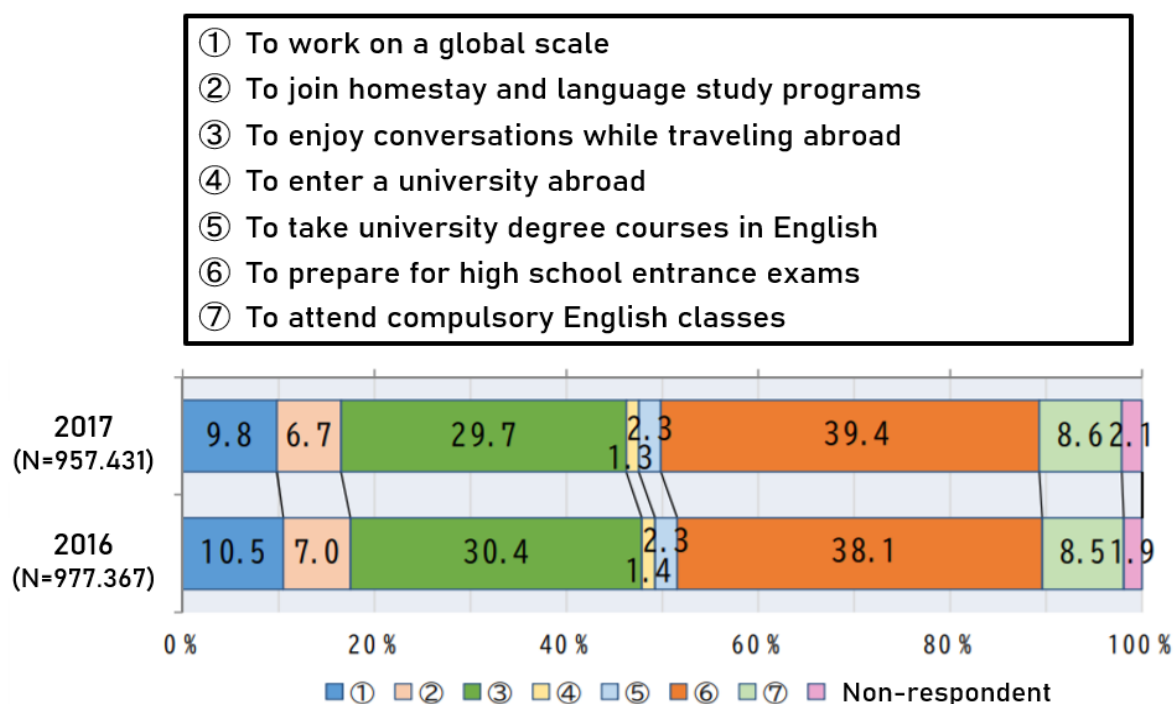
Note. The number of Asian nations excluding countries whose score means were unreliable due to their small sample size.

Why can't many Japanese people speak English even after completing almost 10 years of language education in school? There are two possible answers to this hackneyed question. First, from a linguistic point of view, the distance between the learner's first language (L1) and the target language (e.g., syntactic and phonological dissimilation) definitely becomes a major obstacle in English acquisition by Japanese learners. Chiswick and Miller (2004) developed a linguistic distance measure based on the language proficiency test scores of English-speaking Americans who had participated in the different language training programs. The average scores indicated that both Japanese and Korean languages have the second largest distance from English, followed by Cantonese. In fact, the Foreign Service Institute (FSI), which provides language and culture training to the United States federal government employees with job-related needs, classified about 70 different languages into four categories according to the degree of learning difficulty for native American English speakers. Japanese is considered as a "Super-hard language" in the final category group and a total of 2,200 class hours (88 weeks), which is equal to five times the sum of the first category languages' training hours, is estimated to achieve professional working proficiency in Japanese. To put it the other way around, the total English lesson hours in Japanese six-year secondary schools – four 50-minute lessons per week for 35 weeks; roughly 700 hours in total – obviously does not meet the minimum requirement for becoming fluent English speakers. Second, the economic independence in Japan's monolingual society since the 1950s has resulted in discouraging the majority of Japanese people from learning any foreign languages. The main reason was that the Japanese companies established close and stable business relationships among industrialists, banks, and trading companies to avoid foreign and domestic competitors (Crawford, 1998). This post-war rapid industrial growth had contributed to building higher education and health-care systems, so actually there was no substantial problem in Japanese society without English as opposed to their South East Asian neighbors (e.g., English was given an official status and used as the

major medium for global business in Singapore). Kubota's (2011) in-depth interviews with Japanese workers learning English and manufacturing business managers about the role of English language and English proficiency tests in their career development, demonstrated that English-language skills did not always influence upward career mobility in Japan. Kubota's interview data eventually revealed that the language proficiency tests heighten the value of learning English in Japan as the evidence of efforts to achieve personal business goals, not as the certificate of practical knowledge and skills. Thus, not only the geographically isolated nation but also its socio-economic and political circumstances do not let Japanese students feel a sense of urgency in mastering English. The residual existence of the term "Juken Eigo (English for entrance examinations)" tells the history of traditional teacher-centered English education in Japan over the past 70 years. The 2017 student survey on English language competence conducted by MEXT showed an indisputable fact that approximately 48 percent of Japanese ninth graders learn English simply because it is a compulsory school subject (Figure 1.1). Consequently, they tend to learn grammar or new words by rote in order to give the correct answer to the test question, and hence they are supposed to get in over their head on the TESOL iBT speaking test, which attempts to assess communicative ability in real-life situations.

Figure1.1

The 2017 MEXT Survey on Junior High School Students' purposes of learning English

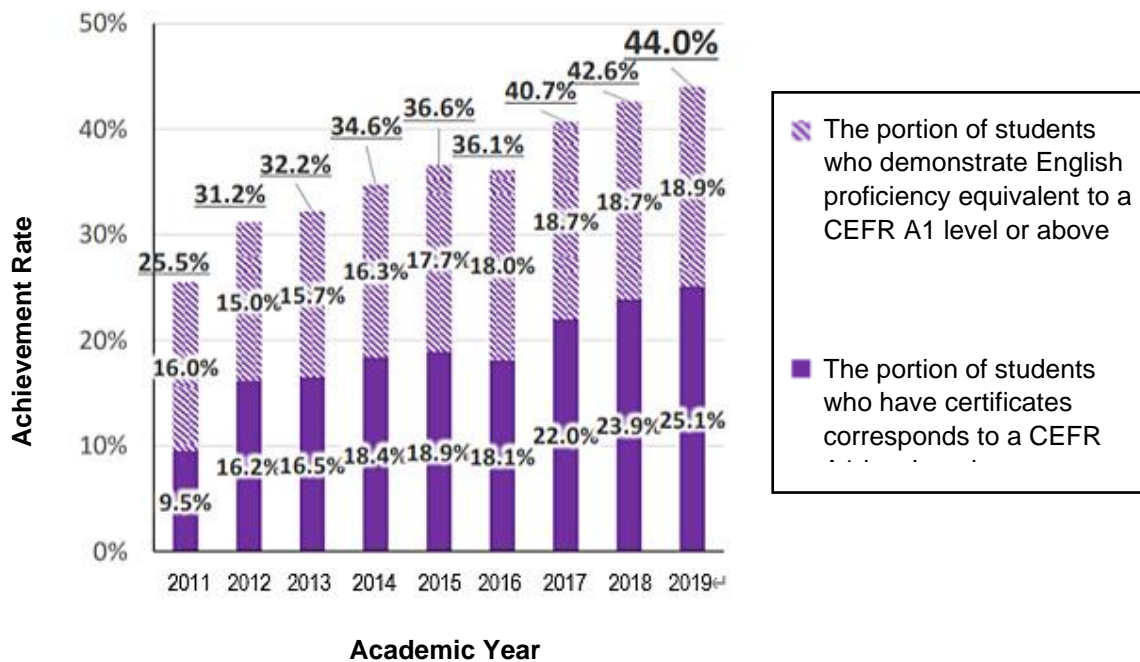


Considering the importance of hosting the 2020 Summer Olympic and Paralympic games, the government of Japan began to buckle down on these long-standing problems related to the limited English proficiency among Japanese people and proposed drastic English educational reforms in order to boost their oral communication skills. From the academic year 2020-2021, the extra-curricular foreign language activities in public elementary schools, which focuses on cultural diversity and multiple languages, became officially English language lessons as a mandatory subject (70 credit hours per year) for both fifth and sixth grade students. From now on, an approximate knowledge of 700-word families will be a basic requirement prior to entering junior high school. The number of target words mastered in three-year junior high school is consequently increased from the previous 1,200 to over 1,600 English word families. During nine-year compulsory education, Japanese EFL students can be expected to acquire at least 2,200-word families from government-authorized textbooks.

Figure 1.2

The Percentage of junior high school students achieving the CEFR A1 Level in the 2019 MEXT survey

MEXT survey



Taking an in-depth look at the 2017 MEXT student survey results, about one third of ninth graders hoped to be able to have conversations in English when traveling abroad. These students' intrinsic motivation and academic achievement goal almost matched with the MEXT's target proficiency level of English language that required 50% of junior high school graduates to reach the level A1 in the Common European Framework of Reference for Languages (CEFR). This framework, corresponding to basic-level users who can understand and use common English expressions, aimed at the satisfying of social needs. Since 2013, the number of junior high school graduates who meet the national English level proficiency standards (Figure 1.2) has been slowly but surely increasing. However, this steady growth of English language skills in Japanese students is not high enough to overturn the result of the international language proficiency scale test, such as a TOEFL iBT, and end the stigma in English-speaking proficiency over the past years. It remains uncertain what aspects of current

education reforms have been directly associated with such positive learning outcomes; however, English textbooks undoubtedly have a substantial impact on Japanese EFL students' language development. In the current transitional period from a grammar-translation approach to a more communication-oriented one, the pedagogical value of English textbooks as main providers of input in a Japanese monolingual language environment should be put to the test more seriously than ever before.

In Japan, textbooks are provided free of charge for all primary and secondary school students. Once every four years, MEXT conducts the approval process of the new English language textbooks released by six of the nation's leading educational publishers including Tokyo Shoseki whose latest editions for junior high school were adopted by one third of prefectural boards of education and used in more than 100 schools for Japanese citizens living abroad. Following the new national education policy of 2020 described above, the MEXT-authorized English textbooks for the fifth and sixth grade were published for the first time.

For the traditional grammar-translation method used by most English teachers in Japan, it was no surprise that English textbooks used in Japanese public schools had placed a strong emphasis on correct grammatical rules and forms. Over extended periods of time, Japanese junior high school EFL learners were required to memorize indispensable vocabulary and grammar rules through the repeated L1 translation exercises solely for the purpose of passing the high school entrance exam. Needless to say, the same learning style was applied to phrasal verb acquisition and the students kept murmuring the word combinations out of context by turning over flashcards to memorize them all together with their one-word equivalents. In this cram studying, students were less likely to be aware of the specific semantic contribution of each constituent particle to the whole structure. They just blindly accumulated receptive word knowledge and missed their chances to develop productive vocabulary skills. Iio (2013) analysed Japanese middle and high school students' usage of phrasal verbs by collecting

written data from two corpora: Japanese EFL Learner (JEFL) Corpus, which consists of approximately 10,000 English essays written by Japanese secondary school students, and the Professional English Research Consortium Corpus (PERC), which has a 17-million-word collection of English scientific journal texts. The findings revealed that the participant students constantly used a limited range of phrasal verbs (e.g., “carry up,” “go back,” and “give up”) which was much less than the total of phrasal-verb instances they encountered in the authorized English textbooks. Ishii (2018) investigated Japanese undergraduate students’ actual use of phrasal verbs by analysing different databases of interview transcripts: the National Institute of Information and Communications Technology Japanese Learner English Corpus (NICT JLE Corpus) and the International Corpus Network of Asian Learners of English (ICNALE) Spoken Module. The performance comparison of native speakers and Japanese learners of English on each oral speech test showed the relatively lower occurrence even in advanced Japanese EFL learners' responses. The researcher raised doubts about whether most of the participants had fully mastered phrasal verbs appeared in these textbooks, while there was no evidence that the undergraduates in this study could be considered as potential users of the current English language textbooks for Japanese secondary school students. It is only certain that MEXT-authorized English textbook improvement can make a significant contribution to reducing the significant gap in productive knowledge between Japanese EFL learners and native speakers.

During the five-year compulsory English language education program, Japanese EFL teachers have to select and present the most common phrasal verbs to teach their students, depending on the level of their English proficiency. The textbook publishing companies, which have created the most powerful and reliable educational tools in Japan, therefore, must take full responsibility for verifying the authors’ word selection procedure to satisfy the users’ need for more appropriate vocabulary input. However, some researchers urged caution in the authors' framework for choosing the words. McAleese’s (2013) corpus-based lexical analysis

of one English coursebook, which was used among faculties of Japanese private colleges, showed that a large proportion of multi-word units (31.7%) were contained within the book and over a quarter of them had significantly low frequencies and range values across a variety of language genres and registers (e.g., casual conversation, news programs, and magazines). Koprowski (2005) found that nearly one-in-four multi-word lexical items used in three-contemporary British coursebooks could be regarded as quite useless for EFL learners because the coursebook designers tended to place more emphasis on lexical diversity than the general utility of each phrase.

Too much reliance on English language textbooks can pose a high risk of the user's inauthentic and unnatural preference for low-frequency words chosen by the authors. Uncommon one-word verb alternatives applied to the situation, in which native English speakers tend to use phrasal verbs, must be labelled as non-native speech. The textbook writers' potential bias in their word choice increases the need to confirm if each combination of a verb and an adverbial particle delivers its higher pedagogical value in order to develop the users' authentic communication skills. The main purpose of this study, therefore, is to measure both the quantity and quality of English phrasal verbs, that are treated in the most recent edition textbooks for Japanese junior high school students, by focusing on the 150 most frequent phrasal verbs in Garnier and Schmitt's (2015) PHaVE List. A comparative analysis of the most productive phrasal verbs in Japanese EFL learners' spoken and written corpora will also contribute to answering of the following research questions:

1. Do the current editions of English textbooks for Japanese junior high schools contain a sufficient number of high-frequency phrasal verbs?
2. What is the difference between Japanese EFL learners and native English speakers in using high-frequency phrasal verbs across the oral and written modes?

CHAPTER III

METHODOLOGY

1. The Comparison of Phrasal Verbs in the MEXT-authorized textbooks

1.1 Junior High School English Textbook Series in Japan

The three widely used English language textbook series designed for beginner-level classes were selected as the subject of the present frequency analysis based on the pedagogical list of phrasal verbs. These mainstream textbooks (2016 editions) were published by the top three companies, which dominated more than 80% of the English textbook industry: *New Horizon* (Tokyo Shoseki), *Sunshine* (Kairyudo), and *New Crown* (Sanseido). Furthermore, the previous versions of the *Sunshine* series (1994 edition) were added as new resources to investigate the change in the ratio of the total number of high-frequency phrasal verbs in the most recent editions. Every educational publisher edited its textbook for adherence to the national curriculum and divided each chapter section into four activities based on the four major English skills (e.g., key vocabulary exercises, target grammar drills, audio practices, and short reading texts). For the present study, only lexical verbs with adverbial particles, which appeared in short reading comprehension passages from the individual chapters, were counted and assessed based on their frequency.

1.2 Three Steps to Extract High Frequency Phrasal Verbs

First, all the print resources (263 reading passages) were converted into digital text files in advance for verb lemmatization and part-of-speech tagging. For the second step, Jupyter Notebook (Figure 2.1), an interactive computing platform, was launched from the Anaconda command prompt in order to run a programming language, Python 3, which is used widely in statistical analysis because of its code simplicity and readability. In the computational

environment, individual words in three raw text data sets were broken into their lemmas with spaCy, which is a free open-source tool for natural language processing (NLP). Then, Python's re module, which provides regular expression matching operations, was used to count the number of times that every high-frequency phrasal verb in Garnier and Schmitt's (2015) pedagogical list appeared in each lemmatized text file. An important point to note here was that this frequency count did not take into account the structural properties of separable transitive phrasal verbs, which allow an object to be placed either between the verb and particle. This analysis did not focus on the key meaning senses provided in the PHaVE list; however, the lexical verbs combined with two or more particles (e.g., "come up with") and with particle-like prepositions (e.g., This is a photo *taken in* 1962. [New Crown English Series 2016 edition]) were not included based on Gardner and Davies' (2007) criteria for identifying target types of phrasal verbs. Thus, in the final step, the manual check process was required to determine the percentage of occurrence for each of 150 high frequency phrasal verbs in the three-textbook series. AntConc version 3.5.8, a concordance software, made it possible to obtain accurate counts of the target phrasal-verbs by focusing on adverbial particles in the text files, which were tagged as RP with the CLAWS version 7 (Constituent Likelihood Automatic Word-tagging System) developed by UCREL at Lancaster University. Ultimately, through the hand-on investigation, the possible chunks with interviewing object nouns, which could not be extracted by the re module in Python, were figured out.

Figure 2.1

A screenshot of a Jupyter notebook showing python code examples and outputs of the lemmatization process

```
In [5]: import re
import spacy
import glob
import os

In [6]: Documents\Ole Miss\Thesis\Phrasal Verbs\Text Files\English Textbook\New Horizon (2016) All.txt", "rb").read().decode("latin

In [7]: type(text)
Out[7]: str

In [8]: nlp = spacy.load("en_core_web_sm")

In [9]: doc = nlp(text)

In [10]: lemma = ' '.join([token.lemma_ for token in doc])

In [11]: lemma
Out[11]: 'good morning , everyone . \r\n good morning . \r\n -PRON- be Ellen Baker . \r\n B - A - k - E - r . \r\n call -PRON- Ms. Bake
r . \r\n ok . be -PRON- Ando Saki ? \r\n yes , -PRON- be . \r\n call -PRON- Saki , please . \r\n oh , a judo uniform . \r\n b
e -PRON- in the judo club , Saki ? \r\n yes , -PRON- be . be -PRON- from America ? \r\n yes , -PRON- be . \r\n be -PRON- from
New York ? \r\n no , -PRON- be not . \r\n -PRON- be from Boston . \r\n so be -PRON- a Boston Red Sox fan ? \r\n yes , -PRON-
be . December 28 \r\n Dear Ms. Baker , \r\n How be -PRON- ? \r\n -PRON- be in a hotel in Boston with -PRON- family . \r\n Har
uki be sleep . \r\n -PRON- can sleep anywhere . \r\n but -PRON- can not sleep tonight . \r\n -PRON- be so excited ! \r\n -PRO
N- have an english book about Boston with -PRON- . \r\n -PRON- can read -PRON- with a dictionary . \r\n -PRON- like this city
. \r\n have a nice winter vacation and a happy new year ! \r\n -PRON- student , \r\n Ando Saki \r\n this be Boston Common .
\r\n -PRON- can skate there . \r\n can -PRON- skate ? \r\n yes . -PRON- can . \r\n let -PRON- walk there . \r\n -PRON- can se
```

2. The Most Common Phrasal Verbs in Japanese EFL Learners' Discourses

2.1 The NICT JLE Corpus

In 2004, Japan's National Institute of Information and Communications Technology created the NICT JLE Corpus by collecting and transcribing the interview recordings from ACTFL-ALC Standard Speaking Test (SST) into the standard American English orthographic forms. The 15-minute one-on-one interview test consists of five stages: (a) warming up questions, (b) a picture description task, (c) a role-play activity, (d) storytelling, and (e) winding-down questions. The interviewer gave familiar topics (e.g., neighborhood, shopping, and restaurant) in the three main tasks. The SST test-takers' oral performances were evaluated according to the ACTFL rating scales ranging from level of 1 (Novice-low) to 9 (Advanced),

and in the corpus, their grammatical and lexical mistakes were labelled with the error tags. The institute also compiled a sub-corpus of 20 native American English speakers (6 females and 14 males; mean age 20.8) for comparison with Japanese EFL speakers. Though Ishii (2018) calculated the numbers of phrasal verbs occurrences in the entire NICT JLE corpus, the 20 out of original 1281 interview data files were selected for this comparative analysis to maintain equal sample size as its native English sub-corpus. Both age and sex distributions in the selected data set were approximately equal to that of native speakers, and these Japanese candidates (6 females and 14 males; mean age 20.9) had no overseas experiences and their average SST proficiency level was 4.05 (Intermediate-low) at the time of the interviews. In order to precisely compare Japanese and native American examinees (Table 2.1), the error tags and interviewers' parts needed to be removed from each file by using the `re.sub()` function in Python, which can replace specific string data with empty values. The original discourse tags (e.g., Non-verbal Sound (cough, laughter, and sniff): `<nvs></nvs>` and Contextual Information:`<ctxt></ctxt>`) were removed too. Then, with the two revised sub-corpora, the number of high frequency phrasal verbs corresponding to the same items in the PHaVE list was counted in the same processing step performed in the MEXT-authorized English textbook analysis.

Table 2.1

Excerpts from the interviewees' utterance files 00512 and 00018 with the original discourse tags in the NICT JLE Corpus

<SST Stage 4> Topic: Stray Cat

File 00512: Japanese EFL learner

<R>One</R> <.></.> one day last week, I go back to my house <F>er</F> with my <F>er</F> girlfriend <F>um</F> from <R>school</R> school. <.></.> <F>Er</F> <?>then</?> <F>uh</F> on the way home, I hear the sound <SC>something</SC> of something. And <SC>it's</SC> <F>ee</F> it seems to hear from box besides <.></.> pole. <F>Mm</F> and <SC>it is</SC> <F>er</F> it was rainy day. So the box <F>er</F> was <SC>close</SC> closed.

File 00018: Native English speaker

One day last week, <F>er</F> Jim and Christine were out for a walk. And it was raining, so they brought their umbrellas with them. And they were walking and talking. And suddenly Jim heard a noise, and it sounded like a cat meowing. So he *turned around*, and there lying in front of the telephone post was a box. And he *opened up* the box, and Christine took a small cat from inside the box.

Note. The original discourse tags: Filler: <F></F>, Self-collection: <SC></SC>, and Repetition: <R></R>

2.2 The NICE Corpus

The Nagoya Interlanguage Corpus of English (NICE) Version 2.3. (Sugiura et al., 2007) was designed to provide English argumentative essays written by Japanese undergraduate and graduate students from different fields of study (e.g., agriculture, engineering, and literature). The subjects were required to choose one social topic that they were personally interested in

(e.g., death penalty, school education, and water pollution) and had 60 minutes to write about 500 words in Microsoft Word. In the writing task, they were allowed to access the Word's spell check function and use the Roman alphabet for their unfamiliar words. All essay samples were checked for contextual and spelling errors by two experienced native English proof-readers, but this analysis only examined the individual raw data before correction. In addition to the 340 essay data files by Japanese EFL learners, the baseline data were gathered from 200 native speakers of English. From each of these two written sub-corpora, 20 text data were extracted with regard to the total number of targeted speech data in NICT JLE corpus (Table 3). The selected Japanese undergraduate students (9 females and 11 males; mean age 20.1) without prior overseas experiences started learning English at the entrance age for junior high school (i.e., 12-13 years old) and achieved the Society for Testing English Proficiency (STEP) score of at least Pre-2nd grade, which is equivalent to level A2 of CEFR, by the end of the Grade 9. This Japanese dataset was lemmatized in Jupyter Notebook to identify its proportion of 150 high-frequency phrasal verbs in comparison to the native counterparts (4 females and 16 males; mean age 26.3).

Table3.1

An excerpt from the NICE corpus data file (Japanese (JPN) 134) with native speakers' corrected sentences (%NTV) and optional comments (%COM)

File 134: Japanese EFL learner	
Topic: Sports	
*JPN134:	Tyuunichi Dragons, professional baseball team, can not be a champion in Japan in 2005. Ochiai Hiromitu is reader in this team.
%NTV:	The Chunichi Dragons, a Japanese professional baseball team, failed to win the championship in 2005. Their leader was Ochiai Hiromitsu.
%COM:	1) "manager" would probably be the proper term instead of "leader", 2) As per the author's shown preference, I will keep the order of Family Name-Given Name even though it is unnatural in English.
*JPN134:	His and teammates' purpose is that they become a champion in Japan in this team.
%NTV:	He and his players have <i>set their sights on</i> becoming the champions of Japan this year.
%COM:	If Ochiai is the manager, then he doesn't have "teammates", he has players.
*JPN134:	Can they become a champion really?
%NTV:	But can they really win the championship?
%COM:	
*JPN134:	We <i>think it thorough</i> 3 key players, Tatunami Kazuyosi and Nakazato Atusi.
%NTV:	I will discuss this by <i>focusing on</i> two key players, Tatsunami Kazuyoshi and Nakazato Atsushi.
%COM:	

CHAPTER IV

RESULTS AND DISCUSSION

1. The Presence of Phrasal Verbs in the MEXT-authorized English Textbooks

One out of three current English textbook publishers satisfied the government's minimum educational requirement in vocabulary for junior high school students (i.e., the target vocabulary size increased from 1000 to 1200 types to meet the 2012 MEXT guideline), however the present research data was collected only from reading comprehension passages in each textbook. The maximum difference between the highest and lowest vocabulary size across three current English textbook editions (reading passages) was 116 types / 782 token words (Table 4.1). This numerical difference is considered to be directly reflected in the vocabulary size gap among junior high school graduates. The ratio of lexical verbs, except a catenative verb "go," to the total number of running words in the individual textbook series that included the old edition published in 1994 was also calculated (Table 4.2). The Compleat Lexical Tutor Vocabulary Profile (Cobb, 1997) divided lexical verbs of each textbook into four frequency bands in the BNC and COCA corpora (i.e., the first and second thousand-level words, academic level words, and lower-level words), and identified that more than 75% of them ranked in the top 1000 most commonly used words (Table 4.3). In fact, only 11 component parts of phrasal verbs on the PHaVE list (10/61 main verbs and 1/13 adverb particles) did not occur in any of the four-textbook series, so there was a strong chance that higher frequency phrasal-verb combinations would account for a larger proportion of the MEXT-authorized English textbooks.

Table 4.1

Number of tokens and types per MEXT-authorized English textbooks calculated in AntConc

	<i>New Horizon</i>	<i>Sunshine</i>	<i>New Crown</i>	<i>Sunshine</i>
	(2016)	(2016)	(2016)	(1994)
Number of Tokens	4,884	6,306	5,666	5,603
Number of Types	1,086	1,266	1,202	1,110

Note. The contracted forms are treated as separate tokens in the AntConc software.

Table 4.2

Distribution of lexical verbs in MEXT-authorized English textbooks

CLAWS POC-tagger	<i>New Horizon</i>	<i>Sunshine</i>	<i>New Crown</i>	<i>Sunshine</i>
(Lexical verb forms)	(2016)	(2016)	(2016)	(1994)
VV0 (base form)	145	189	219	159
VVD (past tense form)	86	165	156	174
VVG (-ing form)	41	55	43	42
VVI (infinitive form)	165	228	184	204
VVN (past participle form)	44	61	53	34
VVZ (-s form)	55	31	60	50
Total number of tokens	536	729	715	663
(% of total number of tokens per textbook)	(10.9%)	(11.5%)	(12.6%)	(11.8%)

Table 4.3*Frequency distribution of lexical verbs (LVs) in MEXT-authorized English textbooks*

	<i>New Horizon</i> (2016)	<i>Sunshine</i> (2016)	<i>New Crown</i> (2016)	<i>Sunshine</i> (1994)
Number of LVs (Types)	144	166	172	144
The first 1000	110	131	132	115
The second 1000	25	29	27	24
Academic words	3	0	7	0
Less-frequent words	6	6	6	5

However, a very limited number of combinations of 15 high-frequency lexical verbs with nine adverbial particles were found across all three current English revised editions. Apparently two out of three textbook series did not provide sufficient instances of common verb-particle constructions (Table 5.1). Gardner and Davies (2007) reported that 2.7 % of all lexical verbs in the BNC (10,404,107 tokens) functioned as components of high-frequency phrasal verbs. The *Sunshine* English course series contained a larger variety of verb-particle combinations than the other two textbooks, but even so, both editions covered only about one-tenth of the top 150 most common phrasal verbs (i.e., 18 combinations of ranking candidates). The ratio of phrasal verbs, including unranked ones in the PHaVE list, to the total lexical-verb tokens existing in each textbook was significantly different (Table 5.1 and Table 5.2). None of the high-frequency phrasal verbs commonly appeared in all three target textbooks nor did they account for half of the total phrasal verb entries in any of the textbooks. For example, the five high-frequency phrasal verb entries in the *New Crown* English series, which were divided into 24 chapters and 87 sections, randomly appeared other than in 42 dialogues based on authentic

spoken interaction. There was nothing in common among all phrasal-verb occurrences within these current editions. These accidental occurrences did not correspond with students' enrolled grade levels. Most instances of phrasal verbs occurred only once throughout the three years of English coursework in junior high school, despite students' need for exposure to such unfamiliar verb-particle combinations in multiple contexts to store information in their long-term memory. In the paired-associate word learning task, Tinkham (1993) found that L2 learners' repetition requirement for word recognition varied widely: most learners required five to seven repetitions to remember the new words, whereas a few needed to encounter the target words more than 20 times. The present findings provided a clear-cut answer to the first research question. The most recent MEXT-approved English textbooks, which were used in more than four-fifths of junior high schools nationwide, showed the obvious lack of adequate and repeated exposure to high-frequency phrasal verbs in a variety of contexts. The textbook authors did not seem to recognize the pedagogical value of phrasal verbs. Not even a single textbook devoted a section to explicit instruction on the unique syntactic and semantic properties of English phrasal verbs. In South Korea, 75% of the vocabulary words in elementary and secondary English textbooks was controlled via the Basic Word List (BWL) of the national curriculum, and the remaining 25% was selected by individual publishers. In spite of that, Shin and Chon (2011) discovered that around 68% of the vocabulary words in 140 English textbooks authorized by the South Korean Ministry of Education were not in the West's (1953) 2,000 General Service List (GSL), nor the Academic Word List (AWL). This shocking result greatly reduces the validity and reliability of the BWL and raises suspicion that the textbook writers' unfounded word choice is based on mere intuition from their own experiences. As Koprowski (2005) strongly pointed out that the intuitive word choices of textbook editors in the contemporary British course books increased the burden on learners to encode low-frequency words, the present results also ensured that the possibility of authors' irrational decisions

caused negative effects on the selection of phrasal verbs in the three main MEXT-authorized textbooks. It also turned out that some of the single-word verbs found in the textbooks, which were classified as academic words at Cobb's Lextutor site (e.g., “relax,” “participate,” and “select”), could be easily replaced by frequent strings from COCA (e.g., “calm down,” “join in,” and “pick out”). Sakata’s (2019) study results indicated that frequent words found in the COCA, which rarely occurred in 24 high school English textbooks authorized by MEXT, more positively correlated with Japanese university EFL learners’ vocabulary size and proficiency development than words occurring frequently in the textbooks which were infrequent in the COCA.

Table 5.1

Number of hits for each high-frequency phrasal verb in the most recent MEXT-authorized English textbooks (2016 editions)

		<i>New Horizon</i>			<i>Sunshine</i>			<i>New Crown</i>		
		7th	8th	9 th	7th	8th	9th	7th	8th	9 th
1	go on	0	1	0	0	2	0	0	0	0
2	pick up	0	0	0	1	0	2	0	0	0
3	come back	0	0	0	0	1	0	0	1	0
4	come up	0	0	1	0	0	0	0	0	0
10	grow up	0	0	0	0	0	0	0	0	1
13	get out	0	0	1	0	0	0	0	0	0
14	come in	0	0	0	1	0	0	0	0	0
16	give up	0	0	1	0	0	0	0	0	2
19	get back	0	0	0	0	0	0	1	0	0

26	go down	0	0	0	1	0	0	0	0	0
30	stand up	0	0	0	0	0	1	0	0	0
44	bring back	0	0	0	0	1	0	0	0	0
57	keep up	0	0	0	0	1	0	0	0	0
61	cut off	0	1	0	1	0	0	0	0	0
76	go through	0	0	0	0	0	1	0	0	0
77	hold on	0	0	0	2	0	0	0	0	0
82	pull back	0	0	0	1	0	0	0	0	0
87	put on	0	0	0	1	0	0	0	0	0
95	back up	0	0	0	1	0	0	0	0	0
109	lay down	0	0	0	0	0	1	0	0	0
115	go around	0	0	0	0	0	1	0	0	0
127	get on	0	1	0	1	0	0	0	0	0
133	pass on	0	0	1	0	1	0	0	0	0
Subtotal		0	3	4	10	6	6	1	1	3

Grand Total	7	22	5
(% of total number of LVs per textbook)	(1.3)	(3.0)	(0.6)

Note. Phrasal verb items are listed in ascending order

Table 5.2

Occurrence of phrasal verbs ranking outside the PHave list's top 150 in the most recent MEXT-authorized English textbooks (2016 editions)

	<i>New Horizon</i>			<i>Sunshine</i>			<i>New Crown</i>		
	7th	8th	9 th	7th	8th	9th	7th	8th	9 th
ask for	0	1	0	0	0	0	0	0	0
believe in	0	0	0	0	0	1	0	0	0
care for	0	0	0	0	0	0	0	2	0
check out	1	1	0	0	0	0	0	0	0
come from	0	1	1	3	0	0	0	0	1
fall on	0	0	0	0	0	1	0	0	0
fill up	0	0	0	0	0	0	0	0	1
give off	0	0	0	0	0	1	0	0	0
get along	0	1	0	0	0	0	0	0	0
get away	0	0	0	0	0	1	0	0	0
go under	0	0	0	0	0	1	0	0	0
hear of	0	0	1	0	0	1	0	0	0
join in	0	0	0	0	1	0	0	0	0
live on	0	0	0	0	0	0	0	0	1
look at	0	3	3	4	3	6	3	2	0
look for	0	1	0	0	0	1	0	1	0
lock up	0	0	1	0	0	0	0	0	0
pass around	0	0	1	0	0	0	0	0	0
remind of	0	0	0	0	0	0	0	0	2

run after	0	0	0	0	0	0	0	1	0
run away	0	0	0	0	0	0	0	1	0
show around	0	1	0	0	0	1	0	0	0
stick out	0	0	0	0	1	0	0	0	0
take away	0	0	1	0	0	0	0	0	0
think about	0	0	1	0	0	0	0	0	1
think of	0	0	0	0	2	0	0	0	1
walk around	0	0	0	0	1	0	0	0	0
Subtotal	1	9	9	7	8	14	3	7	7
Grand Total		19			29			17	

Note. Phrasal verb items are listed in alphabetical order.

The comparison of the latest and previous editions of *Sunshine* English course series revealed serious differences in their word choice and repetition. Although the minimum essential vocabulary size was increased over the past 20 years, the earlier version published in 1994, which contained around 156 types / 700 tokens fewer than the current one, provided just 1.5 times more chances of encountering high-frequency phrasal verbs for beginning English learners (see Table 4.1). These two different editions printed by the same publisher shared only four high frequency phrasal-verb combinations (i.e., “go on,” “come back,” “come in,” and “get on”) and raised serious doubt as whether authors have consistently applied rigorous criteria for word selection even when working with the same publisher. Both ranked and unranked phrasal-verb match counts (Table 6.1 and Table 6.2) in the old 1994 edition were higher than any other current editions, and its total occurrence rate filled nearly 10% of all lexical verbs in the textbook passages. At first glance, this previous version seemed to have a sufficient number of phrasal verbs; however, it rarely reflected a design that prioritized retaining and recycling

word knowledge because no verb-particle combination except “look at” recurred more than three times within an appropriate time interval. As compared to the other recent editions (Table 7.1.), it was also hard to recognize the author's pedagogical intention or planned scaffolding to encourage the users to get to know the basic forms and meanings of phrasal verbs in a three-year sequence of English coursework. In the field of cognitive linguistics, several studies demonstrated the benefit of applying explicit conceptual metaphor awareness to English phrasal-verb teaching, and the positive potential effect of computer-assisted vocabulary learning materials, which facilitate learning the idiomatic combinations with rich visual and conceptual information processing, attracted attention in Japan (Tagawa and Yuizono, 2016). Contrary to the heightened trend of an explicit teaching approach to phrasal verbs, the phrasal-verb occurrence in the current version decreased despite the growth in the total number of words. This outcome brought up a concern that the educational value of phrasal verbs would continue to decline across the wide range of English language textbook publishing in Japan. Liu (2011) mentioned that lower and intermediate level EFL students were more likely to avoid using English phrasal verbs in their spoken discourse. Additional comparative analyses of every publisher's different editions would be needed to determine if phrasal verbs have been gradually overlooked and have consequently contributed to an avoidance phenomenon by Japanese EFL learners due to the lack of their declarative knowledge that would have been acquired through repeated exposure to phrasal verbs commonly used by native speakers.

Table 6.1

Comparison of the number of hits for each high-frequency phrasal verb between two different editions of Sunshine English Textbook series

		1994 edition			2016 edition		
		7 th	8 th	9 th	7 th	8 th	9 th
1	go on	0	1	0	0	2	0
2	pick up	0	0	0	1	0	2
3	come back	0	2	1	0	1	0
5	go back	0	0	1	0	0	0
7	come out	0	0	3	0	0	0
8	go out	1	2	1	0	0	0
10	grow up	0	1	0	0	0	0
11	set up	0	0	2	0	0	0
13	get out	0	1	0	0	0	0
14	come in	0	1	0	1	0	0
16	give up	0	1	2	0	0	0
17	make up	0	1	0	0	0	0
24	take out	0	1	1	0	0	0
25	come on	1	0	0	0	0	0
26	go down	0	0	0	1	0	0
28	take off	0	1	0	0	0	0
30	stand up	0	0	0	0	0	1
33	go up	0	1	0	0	0	0
44	bring back	0	0	0	0	1	0

57	keep up	0	0	0	0	1	0
61	cut off	0	0	0	1	0	0
65	clean up	0	1	0	0	0	0
74	go over	0	1	0	0	0	0
76	go through	0	0	0	0	0	1
77	hold on	0	0	0	2	0	0
82	pull back	0	0	0	1	0	0
87	put on	0	0	0	1	0	0
95	back up	0	0	0	1	0	0
98	get in	1	0	0	0	0	0
109	lay down	0	0	0	0	0	1
115	go around	0	0	0	0	0	1
127	get on	0	1	0	1	0	0
133	pass on	0	0	0	0	1	0
Subtotal		3	16	11	10	6	6

Grand Total

30

22

(% of total number of

(4.5)

(3.0)

LVs per textbook)

Note. Phrasal verb items are listed in ascending order.

Table 6.2

Occurrence of phrasal verbs ranking outside the PHaVE list's top 150 in two different editions of Sunshine English Textbook series

	1994 edition			2016 edition		
	7 th	8 th	9 th	7 th	8 th	9 th
believe in	0	0	0	0	0	1
belong to	0	0	1	0	0	0
carry down	0	0	1	0	0	0
come from	0	1	3	3	0	0
depend on	0	0	1	0	0	0
die out	0	0	1	0	0	0
fall on	0	0	0	0	0	1
get away	0	0	0	0	0	1
give off	0	0	0	0	0	1
go away	0	0	1	0	0	0
go over	0	1	0	0	0	0
go under	0	0	0	0	0	1
hear of	0	0	0	0	0	1
join in	0	1	0	0	1	0
look at	2	6	2	4	3	6
look for	0	0	0	0	0	1
look over (there)	0	0	1	0	0	0
point to	0	0	1	0	0	0
run away	0	1	0	0	0	0

show around	0	0	0	0	0	1
speak to	0	1	1	0	0	0
spread out	0	1	0	0	0	0
stick out	0	0	0	0	1	0
take away	0	1	0	0	0	0
think about	0	1	0	0	0	0
think of	0	0	0	0	2	0
walk around	0	0	0	0	1	0
walk back	0	1	0	0	0	0
welcome back	0	1	0	0	0	0
Subtotal	2	16	13	7	8	14
Grand Total		31			29	

Note. Phrasal verb items are listed in alphabetical order.

Table 7.1*Total number of phrasal verbs in each MEXT-authorized English textbook*

150 High-frequency Phrasal Verbs	<i>New Horizon</i> (2016)	<i>Sunshine</i> (2016)	<i>New Crown</i> (2016)	<i>Sunshine</i> (1994)
Ranked Items	7	22	5	30
Unranked Items	19	29	17	31
Total	26	51	22	61
(% of total number of LVs per textbook)	(4.8)	(6.9)	(3.0)	(9.2)

2. The Use of High-frequency Phrasal Verbs by Japanese EFL Learners

2.1 The Oral Production Mode

Even in the 15-minute oral interview on similar topics, the native American English speakers produced substantially more outputs than Japanese test-takers who were assumed to have a higher chance to use MEXT-approved textbooks (1994 editions) in junior high school English language classes (Table 8.1). In terms of the proportion of verbs, however, lexical verb forms, which were classified by CLAWS software, covered about 10% of all entries in both collections of interview data (Table 8.2), while there was a roughly 4000-word gap between total number of word utterances of American and Japanese interviewees. By a simple calculation, the average number of words delivered by a native speaker per minute was more than five times higher than that of the Japanese participant in the interview (around 60 words per minute). In Japanese EFL speakers' responses, the uninflected form accounted for about half of the lexical verb items and the third-person singular forms were selected far less than those used by native English speakers.

Table8.1*Number of tokens and types in NICT-JLE spoken sub-corpora*

	Japanese JEF Learners	Native English Speakers
Word Tokens	17,742	99,651
Word Types	1,610	4,865

Table8.2*Distribution of lexical verbs in NICT-JLE spoken sub-corpora*

CLAWS POC-tagger (Lexical verb forms)	Japanese JEF Learners	Native English Speakers
VV0 (base form)	989	3,886
VVD (past tense form)	233	1,525
VVG (-ing form)	220	1,399
VVI (infinitive form)	425	2,746
VVN (past participle form)	68	779
VVZ (-s form)	36	594
Total	1,971	10,929
(% of total number of tokens per textbook)	(11.1)	(10.9)

Table 8.3

Comparison of the total number of hits for 150 high-frequency phrasal verbs between the two NICT-JLE spoken sub-corpora

	Japanese JEF Learners	Native English Speakers
150 High-frequency Phrasal Verbs	27	707
(% of total number of LVs per textbook)	(1.36)	(6.46)

Compared to two interview sub-corpora on a ratio of verbs used to form the top 150 high-frequency phrasal verbs to total number of lexical verbs, native English speakers' utterances contained nearly five times as many verbs with adverbial particles as Japanese counterparts (Table 8.3). The ratio of all phrasal verbs to complete lexical verbs in the native speakers' interview transcripts could increase more than 6% since the present investigation targeted only 150 high-frequency combinations. There were at least 707 target instances in the native speakers' interview data (99,651 tokens in total), which showed the higher occurrence of phrasal verbs than that in BNC (i.e., one phrasal verb every 140 words). Despite this considerably different number of occurrences, partly because of answering similar interview questions on the same topics, the six fixed verb-particle combinations (i.e., "go back," "go on," "go out," "get on," "come back," and "get out") were ranked in the top 10 most used phrasal verb items in both corpora (Table 9.1). The Sunshine textbook, which was released in 1994 when the Japanese interviewees were junior high school students, included all six phrasal verbs (e.g., "go on" appeared at least once in every applicable grade), and three of them were also found in the current textbook series. The native speakers used more than five times as many different high frequency phrasal verb forms (i.e., 93 out of 150 combinations in the PHaVE list) as the Japanese EFL learners. Besides that, the remaining five combinations (i.e., "go in," "end up," "hang out," "get in," and "come up"), which had high distribution rates across native

speeches, were not found within any Japanese utterance. Only the occurrence of “get in” was confirmed in the 1994 edition. 27 target combinations were found in 13 Japanese individual’s data. There was concern that the interviewer’s verbal behavior could affect the test-takers’ answer, but each target phrasal verb was produced by interviewees first. In the pre-interview questionnaire, all 20 Japanese participants informed that they had no experience living overseas. Their average oral proficiency level based on the ACTFL standard was 4.05 (Intermediate-low). Though three interviewees scored above Intermediate-low and could produce the target high-frequency phrasal verbs. The highest-level candidate (Intermediate-high) used “sit down” only once in the 15-minute speaking test. On the other hand, the active phrasal-verb use was seen in the lowest-level test taker (Novice-high), who produced three different combinations (i.e., “go on,” “come on,” and “make up”), so there was no strong correlation between interviewees’ linguistic proficiency and phrasal verb usage in this interview. Comparing the number of total verbs followed by adverbial particles tagged as RP in the CLAWS program, there was a twenty-fold difference between two speech sub-corpora (i.e., 1,108 items vs. 54 items). It became quite apparent that Japanese EFL speakers could produce incomparably fewer phrasal verbs than native English speakers in oral communication. Unfortunately, in the present study, it was not possible to prove that 20 Japanese interviewees for the current study had used the textbook in junior high school in order to show a correlation between their knowledge of phrasal verbs gained primarily through the textbook and their ability to use phrasal verbs in spoken contexts. More detailed corpus-based analysis would, therefore, be needed to examine whether or not the textbook-based receptive vocabulary knowledge would contribute to enhancing productive vocabulary size and bridging the tremendous gap in phrasal verbs usage between native English and Japanese EFL speakers.

Table 9.1*Comparison of the top 10 high-frequency phrasal verbs in the NICT-JLE spoken sub-corpora*

Rank	The PHaVE List	Japanese JEF Learners	Native English Speakers
1	go on	go back (5)	go out (65)
2	pick up	go on (4)	go back (40)
3	come back	give up (3)	go in (38)
4	come up	bring back (2) get back (2) get on (2) go out (2)	end up (32)
5	go back	come back (1) come on (1) get out (1) get up (1) make up (1) sit down (1) take back (1)	go on (30)
6	find out	none	hang out (29)
7	come out		get in (28)
8	go out		come back (22) get on (22)
9	point out		come up (20)
10	grow up		get out (18)

Note. Numbers in parentheses indicate the total number of occurrences in each sub-corpus.

2.2 The Written Production Mode

In comparison of two argumentative essay datasets, there was no drastic difference as with the NICT-JLE spoken corpus, but native English speakers naturally produced more than twice as many tokens as Japanese EFL learners (Table 10.1). Native speakers wrote over 700 words per person on average, which is twice as much as the number of words in a Japanese essay. Compared to the interview, the rate of infinitive forms was higher in both written sub-corpora, and there was no noticeable difference in the syntactic distributional patterns of lexical verbs. The result that was similar to the interview speech data analysis was the ratio of the verb items to total number of word tokens (Table 10.2). Slightly more lexical verb forms were found in Japanese undergraduate students' essays, but the distribution was unbalanced due to the overuse of base-form verbs.

Table 10.1

Number of tokens and types in NICE written sub-corpora

	Japanese JEF Learners	Native English Speakers
Word Tokens	6,209	14,468
Word Types	992	2,487

Table 10.2*Distribution of lexical verbs in NICE written sub-corpora*

CLAWS POC-tagger (Lexical verb forms)	Japanese JEF Learners	Native English Speakers
VV0 (base form)	242	290
VVD (past tense form)	46	144
VVG (-ing form)	61	262
VVI (infinitive form)	278	522
VVN (past participle form)	91	274
VVZ (-s form)	49	158
Total	767	1,650
(% of total number of tokens per textbook)	(12.3)	(11.4)

Table 10.3

Comparison of the total number of hits for 150 high-frequency phrasal verbs between the two NICE written sub-corpora

	20 Japanese JEF Learners	20 Native English Speakers
150 High-frequency Phrasal Verbs	8	62
(% of total number of LVs per textbook)	(1.04)	(3.75)

The 20 native English speakers produced 37 different kinds of high-frequency phrasal verbs out of the 150 in their written discourse. More than half of target phrasal-verb

combinations occurred only once, and even the most widely used unit, “go on,” was produced by only five native participants. Even though, in the first place, it was not possible to make a general comparison with the spoken data from different participants, it became clear that native speakers had no obvious preference or common pattern in phrasal verb use in the test-style essay writing even on the same topics. In contrast, the ratio of high-frequency phrasal verbs in the Japanese essays was not as much as the difference in the interview tasks but roughly equal to one-quarter of the ratio in native speakers’ essay data. In addition to the four different target combinations confirmed in the Japanese written data, there were only three verbs with adverbial particles tagged as RP in the CLAWS tagging system (i.e., “hand out,” “rise up,” and “work on”). Quite a few combinations were used among five limited essays, and two of them (i.e., “go on” and “come back”) randomly appeared in three different textbook series (2016 editions). Regardless of individual English proficiency levels, most Japanese participants tended to rely on one-word verbs instead of high-frequency phrasal verbs in their written communication. It proved insufficient to get answers to the second research question from the simple result of numerical difference between two corpora ignoring each data collection setting. A variety of language registers (e.g., speaking/writing, casual/formal, and individual/group settings) needed to be considered as factors on the Japanese usage rate of high-frequency phrasal verbs in two different discourse data. Many leading textbook writers, teachers, and administrators also should pay more attention to the boundary actually existing between spoken and written words and grammar. Based on this written data analysis — that overall, the native English speakers did not exhibit any particular preference for phrasal verbs — teaching high-frequency phrasal verbs could be expected to have more practical effect on improving spoken English skills without employing avoidance strategies, and it could align with the current goal of the Ministry of Education, which emphasizes conversational ability.

Table 11.1*Comparison of the top 10 high-frequency phrasal verbs in the NICE written sub-corpora*

Rank	The PHaVE list	Japanese JEF Learners	Native English Speakers	
1	go on	go out (4)	go on (5)	
2	pick up	come back (2)	give up (4)	
3	come back	carry out (1)	go through (3)	
		end up (1)	take on (3)	
4	come up	none	catch up (2)	look back (2)
			clean up (2)	look down (2)
			come in (2)	make up (2)
			come out (2)	pick up (2)
			figure out (2)	run out (2)
			find out (2)	take in (2)
				wake up (2)
5	go back	none	break down (1)	keep on (1)
			break up (1)	move on (1)
			come about (1)	move up (1)
			come back (1)	play out (1)
			come up (1)	put up (1)
			get down (1)	set up (1)
			go back (1)	sum up (1)
			go out (1)	take over (1)
			go down (1)	take up (1)
6	find out	none	none	

7	come out	none	none
8	go out	none	none
9	point out	none	none
10	grow up	none	none

Note. Numbers in parentheses indicate the total number of occurrences in each sub-corpus.

CHAPTER V

CONCLUSION

As Nation (2016) suggested, the process of a successful English language curriculum development should start from teaching general high-frequency words. In terms of phrasal verbs, however, the top three English language textbooks for Japanese junior high schools did not provide enough opportunities to master the most common combinations. Although Japan's national curriculum guideline had been stressing the importance of speaking abilities, the MEXT-authorized textbooks still seemed to contain more vocabulary items stubbornly rooted in written language, disregarding the essential items for improving speaking skills. Particularly the result of native speakers' spoken data proved the validity of the corpus-based frequency measures. The textbook writers, therefore, should focus on using various corpus resources in measuring lexical diversity to create rich stimuli for students' language development. English teachers in Japan need to be aware that they tend to regard textbooks as an authoritative and reliable source of information. Their supplementary materials will compensate for students' imbalanced vocabulary learning and remove the undesirable preference of using one-word verbs.

This comparative corpus analysis of phrasal verb use revealed native English speakers' higher degree of positive familiarity with phrasal verbs than Japanese EFL learners. Mainly through authentic oral communication, English phrasal verbs were produced not only in large quantities but also wide varieties by native English speakers. More than 60% of the total 150 entries in the PHaVE list were found even though the small sample size of speech data was spoken by only 20 selected native speakers. EFL practitioners must face challenges in filling the gap between the two to ensure smooth communication. They should not overlook spoken

language grammar for successful approaches to phrasal verb acquisition. McCarthy and Carter (2001), who laid out the 10 criteria for a spoken grammar from their corpus-based research findings, claimed that it was challenging to design a pedagogical spoken grammar curriculum and syllabus because of its unique features which were completely different from written grammar. As mentioned earlier, English phrasal verbs, including most combinations on the PHaVE list, also have special features of connected speech (e.g., intrusion: go [gou] + in [ɪn] → go in [gouwɪn]). In order to become familiar with such complex phrasal verbs, English learners who have limited natural speech inputs and outputs need to retain and recycle the individual meaning and pronunciation over time from early stages of language learning. There's no reason not to take advantage of children and adolescents in sensitively perceiving both native and non-native speech sounds (Baker et al., 2008). Recently, many referenceable corpus-based English language textbooks have been published (e.g., Cambridge University Press's *Touchstone* series based on the Cambridge International Corpus containing both oral and text data). Further research is required to figure out how much future MEXT-authorized textbooks could make positive changes in Japanese learners' productive skills.

LIST OF REFERENCES

- Abdul Rahman, Z. A., & Abid, R. Z. (2014). Rarity or non-existence of phrasal verbs in the written discourse of Omani student-teachers of English. *SAGE Open*, 4(4), 1-10.
- Alangari, M., Jaworska, S., & Laws, J. (2020). Who's afraid of phrasal verbs? The use of phrasal verbs in expert academic writing in the discipline of linguistics. *Journal of English for Academic Purposes*, 43.
- Baker, W., Trofimovich, P., Flege, J. E., Mack, M., & Halter, R. (2008). Child–adult differences in second-language phonological learning: The role of cross-language similarity. *Language and Speech*, 51(4), 317–342.
- Chiswick, B., & Miller, P. (2004). Linguistic distance: A quantitative measure of the distance between English and other languages. *Journal of Multilingual and Multicultural Development*, 26, 1 - 11.
- Cobb, T. (1997). The Compleat Lexical Tutor [website] University of Montreal, Quebec. Retrieved on November 13, 2020 from <lextutor.ca>.
- Crawford, R.J. (1998). *Reinterpreting the Japanese economic miracle*. Cambridge, MA: Harvard University Press.
- Dixon, R. M. W. (1991). *A new approach to English grammar, on semantic principles*. Oxford: Clarendon Press.
- Educational Testing Service. (2017). *Test and score data summary for the TOEFL iBT Test*. Retrieved from <http://www.afob.org/newsletter/180710/16.pdf>
- Educational Testing Service. (2018). *Test and score data summary for the TOEFL iBT Test*. Retrieved from https://www.toefl-ibt.jp/dcms_media/other/toefl_data.pdf

- Educational Testing Service. (2019). *Test and score data summary for the TOEFL iBT Test*. Retrieved from https://www.toefl-ibt.jp/dcms_media/other/toefl_data.pdf
- Educational Testing Service. (2020). *Test and score data summary for the TOEFL iBT Test*. Retrieved from https://www.ets.org/s/toefl/pdf/94227_unlweb.pdf
- Foreign Language Training - United States Department of State. (2020, March 6). *FSI's experience with language learning*. <https://www.state.gov/foreign-language-training/>
- Gardner, D., & Davies, M. (2007). Pointing out frequent phrasal verbs: A corpus-based analysis. *TESOL Quarterly*, 41, 339-359.
- Garnier, M., & Schmitt, N. (2015). The PHaVE List: A pedagogical list of phrasal verbs and their most frequent meaning senses. *Language Teaching Research*, 19, 645 - 666.
- Garnier, M., & Schmitt, N. (2016). Picking up polysemous phrasal verbs: How many do learners know and what facilitates this knowledge? *System*, 59, 29–44.
- Hornby, A. S. (1995). *Oxford advanced learner's dictionary*. Oxford: Oxford University Press.
- Hulstijn, J. H., & Marchena, E. (1989). Avoidance: Grammatical or semantic causes? *Studies in Second Language Acquisition*, 11 (3), 241-255.
- Iio, Y. (2013). English verb-particle constructions: A gradient analysis. *International Journal of Social and Cultural Studies*, 6, 1-24.
- Ishii, Y. (2018). An analysis of phrasal verbs used by Japanese EFL learners: Based on spoken learner corpora and authorized English textbooks. *Learner Corpus Studies in Asia and the World*, 3, 101–119.
- Kleinmann, H. H. (1977). Avoidance behavior in adult second language acquisition. *Language Learning*, 27, 93–107.
- Koprowski, M. (2005). Investigating the usefulness of lexical phrases in contemporary coursebooks. *ELT Journal*, 59, 322–332.

- Kubota, R. (2011). Questioning linguistic instrumentalism: English, neoliberalism, and language tests in Japan. *Linguistics and Education*, 22, 248-260.
- Laurence, N. (2018). A comparative study of Japanese compound verbs and English phrasal verbs: The examples of “-agaru” and “-ageru.” *Japanese Studies: Research and Education Annual Report*, 22, 53-71.
- Liao, Y., & Fukuya, Y.J. (2004). Avoidance of phrasal verbs: The case of Chinese learners of English. *Language Learning*, 54, 193-226.
- Liu, D. (2011). The most frequently used English phrasal verbs in American and British English: A multicorpus examination. *TESOL Quarterly*, 45, 661–688.
- McAleese, P. (2013). Investigating multi-word items in a contemporary ELT course book. In N. Sonda & A. Krause (Eds.), *JALT2012 Conference Proceedings*, 321-329. Tokyo: JALT.
- McCarthy, M. J., & Carter, R. A. (2001). Ten criteria for a spoken grammar. In E. Hinkel & S. Fotos (Eds.), *New Perspectives on Grammar Teaching in Second Language Classrooms* (pp. 51-75). Lawrence Erlbaum Associates.
- Ministry of Education, Culture, Sports, Science and Technology – Japan (MEXT). (2018, April 6). *Heisei 29 nendo eigoryoku chousa kekka (chugaku Koukou 3 nensei) no sokuhou* [2017 English proficiency survey preliminary results of the junior and senior high school third year students]. https://www.mext.go.jp/a_menu/kokusai/gaikokugo/
- Ministry of Education, Culture, Sports, Science and Technology – Japan (MEXT). (2020, July 15). *Reiwa gannendo eigoryoku chousa kekka (chugaku Koukou 3 nensei) no sokuhou* [2019 English proficiency survey preliminary results of the junior and senior high school third year students]. https://www.mext.go.jp/a_menu/kokusai/gaikokugo/
- National Center for Voice and Speech. (n.d.). *Voice Qualities*.
<http://www.ncvs.org/ncvs/tutorials/voiceprod/tutorial/quality.html>

- Nation, I. S. P. (2016). *Making and using word lists for language learning and testing*. Amsterdam: John Benjamins.
- Nieda, M. (2006). Eigo kudoushi no ninchi gengogaku teki bunseki [A cognitive analysis of English phrasal verbs]. *Bulletin of Kyoto University of Education*, 109, 31-43.
- Sakata, N. (2019). Profiling vocabulary for proficiency development: Effects of input and general frequencies on L2 learning. *System*, 87, 102167.
- Shin, D., & Chon, Y.V. (2011). A corpus-based analysis of curriculum-based elementary and secondary English textbooks. *Multimedia-Assisted Language Learning*, 14(1), 149–175.
- Siyanova, A., & Schmitt, N. (2007). Native and nonnative use of multi-word vs. one-word verbs. *IRAL*, 45(2), 119-139.
- Sugiura, M., Narita, M., Ishida, T., Sakaue, T., Murao, R., & Muraki, K. (2007). A discriminant analysis of non-native speakers and native speakers of English NICE: Learner Corpus 2.0 to come. *Proceedings of the 2007 Corpus Linguistics Conference*.
- Tagawa, T., & Yuizono, T. (2016). Eigokudoushi no gokan gakushu o shien suru taburetto tanmatsu kyouzai no kaihatsu to hyouka [Development and evaluation of image-based learning system to acquire English phrasal verbs on tablet terminals]. *The Special Interest Group Technical Reports of IPSJ*, 26(1), 1-7.
- Thrush, E. (2001). Plain English? A study of plain English vocabulary and international audiences. *Technical Communication*. 48. 289-296.
- Tinkham, T. (1993). The effect of semantic clustering on the learning of second language vocabulary. *System*, 21(3), 371-380
- Yasuda, S. (2010). Learning phrasal verbs through conceptual metaphors: A case of Japanese EFL Learners. *TESOL Quarterly*, 44, 250–273.
- You, Y. (1999). Avoidance phenomena of phrasal verbs by Korean learners of English. *English Teaching*, 54(3), 135-155.

VITA

B.A. in English, Doshisha University, Japan, 2004