

# Implementation of Data-Driven Learning (DDL) in a Course for *English Reading and Writing*

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## Abstract

This research evaluates the effectiveness of data-driven learning (DDL) in Japanese university-level English classes. DDL, where learners use corpora to discover linguistic patterns, was applied in two first-year mandatory classes in *English Reading and Writing* at Rikkyo University. The paper reports our educational practices on the development of the DDL tasks, focusing on the target vocabulary covered in the assigned coursebooks and the inductive instructions to encourage the students to engage in DDL. The qualitative analyses focused on DDL tasks involving vocabulary, collocations, and grammar. The findings suggest that DDL enhances lexical comprehension, particularly when learners are guided toward specific linguistic elements. Tasks on collocations and verb-noun combinations were notably effective. However, challenges such as the time-intensive nature of DDL and its inconsistent impact on practical language use were observed. These insights highlight the need for a balanced DDL task design and further research on optimizing DDL for diverse learning environments. The study underscores the potential of DDL in English language teaching and its role in fostering independent learning.

**Keywords:** *Data-driven learning (DDL), English language teaching (ELT), Corpus linguistics*

## Introduction

Data-driven learning (DDL) is an approach in which learners actively consult corpora to inductively discover linguistic patterns and usages. As originally advocated by Johns (1991), this approach utilizes rich real-world language data, empowering learners to notice and deduce rules of grammar, vocabulary, and semantics, autonomously. The efficacy of DDL has been corroborated through meta-analytical studies by scholars such as Boulton and Cobb (2017) and Mizumoto and Chujo (2015), highlighting its pedagogical advantages in language teaching.

In response to the rise of DDL in the field of language teaching, this study aims to promote the implementation of DDL in English language teaching (ELT) in Japan. This aim is pursued through an investigation into the effectiveness of various DDL tasks, which are tailored

to align with the Common European Framework of Reference for Languages (CEFR) levels, to promote the development and subsequent prevalence of pedagogical materials designed to accommodate learners at varying stages of language proficiency.

The 2023 academic year serves as the foundational phase for our research, during which diverse DDL tasks targeting different grammatical and lexical items will have been put into practice. As one of the foundation phase practices, this paper reports on the authors' DDL practice conducted at Rikkyo University. This initial stage is pivotal, as it sets the groundwork for subsequent analysis and material creation. We hope the outcomes of this project will be of significant value to English teachers in Japan seeking options for teaching materials, thereby contributing to a broader understanding of the role of DDL in language teaching.

## Literature Review

DDL is a pedagogical approach wherein learners are immersed in vast amounts of authentic usage of the target language in corpora, facilitating their independent navigation and deduction of linguistic patterns. This approach originated from Johns (1991). Since then, DDL has been an option in second language (L2) instruction, supported by the evolution of computer technology and the widespread availability of the Internet, drawing considerable scholarly focus on using corpora in L2 education.

The efficacy of DDL in enhancing language acquisition has been reported by various meta-analytic studies (e.g., Boulton & Cobb, 2017; Lee et al., 2019; Mizumoto & Chujo, 2015). An example of previous empirical research in this domain was conducted by Tono et al. (2014). Their research scrutinized the impact of consulting the British National Corpus (BNC) on correcting errors in writing in English as a foreign language (EFL). In this study, 93 university students engaged in an essay-writing exercise without reference materials, and the authors gave feedback on two identified errors in each student's paper. Subsequently, after a three-week interval, the students revised the essay, consulting either the BNC or dictionaries. The 188 errors identified were categorized into three major types: omission (where lexical items are omitted), addition (which contains a redundant item), and misformation (where a grammatical form is misplaced). The results demonstrated that corpus usage significantly enhanced the correction of omission and addition errors but was less effective in correcting those categorized as misformation, suggesting that certain errors are more amenable to correction through corpus resources than others.

Notwithstanding the demonstrated benefits of DDL, its adoption in ELT in Japan remains underutilized. While meta-analyses have made clear some of the controversial aspects of DDL (Tono, 2015), the longitudinal research on corpus use conducted in Japanese educational contexts, which has reported the impacts on learning English (e.g., Satake, 2020; Chujo et al., 2015; Hadley & Charles, 2017), is relatively scant. This paucity of evidence may contribute to teachers' hesitancy in taking a DDL approach in English classrooms in Japan.

There is a need for further research that shows the specific benefits of corpus use on L2 learning, potentially persuading a greater number of English teachers in Japan of DDL's value and encouraging its integration into their teaching. Thus, this study investigates the effects of various DDL tasks within the framework of English courses where instructors are constrained by university-wide, unified syllabi with semi-mandatory textbook assignments.

## **Methods**

### **Participants**

The participants in this research were first-year students enrolled in two classes of a 14-week mandatory English course focusing on reading and writing, taught by the authors of this paper in the spring semester of the 2023 academic year. One class of 21 participants was designated as Level 2, corresponding to CEFR levels B1 to B2, while the other class, comprising 19 participants, was classified as Level 3, aligning with CEFR levels A2 to B1. Before performing the DDL practices, the participants received a thorough explanation of the research, and their written informed consent was obtained. Only data from those who consented to participate were included in the analysis for this paper.

### **Development of Tasks and Corpora Used in DDL**

In both Levels 2 and 3 classes, the participants engaged with corpora to perform DDL tasks designed to facilitate learning vocabulary items featured in the semi-mandated course textbooks. After completing all the DDL tasks, the authors observed and analyzed the worksheets of the participants in their respective classes. This research primarily focused on a qualitative observation of the effects of various DDL tasks. Consequently, it did not involve any quantitative validation processes, such as pre- and post-testing.

### ***Level 2 Class***

The Level 2 class used the coursebook titled *Q: Skills for Success: Reading & Writing 4* (Daise & Norloff, 2020). The second author, who also served as the instructor, developed and implemented a set of six worksheets to help students learn collocations, prefixes, and suffixes. Each session gave the participants 15–20 minutes to engage with a DDL task. The participants were given instructions and encouraged to complete the worksheets in English. When the participants were unable to complete a given task within an allocated time, they worked on the unfinished parts as homework outside of class time.

In this class, a corpus tool called Sketch Engine for Language Learning (SKELL) provided by Lexical Computing CZ s.r.o. (2021) was utilized for DDL activities. The data sources of this tool contain a varied collection of texts including news, academic papers, Wikipedia articles, open-source books, web pages, discussion forums, and blogs. This data is selectively compiled to aid learners of English to access examples providing how language

is used in various contexts. SKELL allows users to explore authentic language use through example sentences in the *Examples* page, the *Word Sketch* page showing co-occurring words, and thesaurus functions in the page of *Similar Words*. SKELL enables learners to observe how words and phrases are used in various contexts, which can aid in understanding nuances and usage patterns in the target language. SKELL was used for this research due to its user-friendly interface, which requires no registration and is freely accessible. Users can swiftly receive results by simply typing the target word or phrase, making it an ideal tool for exploring language patterns in our research.

### ***Level 3 Class***

The first author taught the Level 3 class, covering Units 1, 2, and 4 from the coursebook *Q: Skills for Success: Reading & Writing 3* (Ward & Gramer, 2020). We collaboratively developed eight worksheets focusing on the target vocabulary in the units during the course. The students received the instructions and engaged in the DDL activities in the classroom (with approximately 20–30 minutes dedicated to each) and were also assigned some of the worksheets to complete autonomously outside the classroom. Considering their English proficiency level, the participants' mother tongue (Japanese) was used in the instructions and in the worksheets where they were asked to fill in their findings on lexical behaviors from corpora. This is in contrast to Level 2, where the major instruction language was mostly limited to English.

In this class, SKELL was utilized in five worksheets (i.e., Worksheets 1, 2, 3, 5, and 8) as classroom activities and homework assignments submitted via the university's Learning Management System, while the BNC—a balanced corpus composed of one hundred million tokens of spoken and written data of British English, representing a wide variety of genres in the late 20th century—was used for three worksheets (i.e., Worksheets 4, 6, and 7) in class. The Rikkyo University Library provides registered users with free access to BNC Online in the Shogakukan Corpus Network (NetAdvance Inc., 2022) via the university's network. The interface allows users to access concordance lines, frequency information, collocations, and inflectional patterns by searching the target lexical word or phrase. Users can also specify the part-of-speech information of the target words. In the Shogakukan Corpus Network, the function tabs in the BNC are given in Japanese. However, as this service will terminate at the end of March 2024, the university library holds an institutional account for students to freely access the Sketch Engine, which contains 700 corpora in more than 100 languages, including the BNC and SKELL, with various advanced corpus tools such as *Word Sketch* (i.e., collocations and word combinations), *Thesaurus*, *Word Sketch Difference* (i.e., comparing collocations of two words), *Concordance*, *Wordlist*, etc. (Lexical Computing CZ s.r.o., n.d.).

## **Results and Discussion**

This section describes the procedures of DDL activities and reports the participants'

observations of lexical behaviors of the target vocabulary in specified corpora in Level 2 and 3 classes. First, we describe two worksheets that required participants to find collocations and lexical meanings of the target vocabulary using several corpora, conducted in the last three weeks of Level 3, where receptive observations were mainly performed. Then, we summarize the quantitative and qualitative overview of the Level 2 participants, not only their findings on lexico-grammatical features, such as nouns, verbs, collocations, prefixes, and suffixes, but also applications of their findings to their own written products.

### DDL for CEFR A1–B1 EFL Learners (Level 3 Class)

The target vocabulary in Level 3 were “appreciate,” “confidence,” and “research (noun)” from Unit 1; “at risk,” “arrange,” and words related to food such as “recipe,” “onions,” “flavor,” “limes,” and “restaurants,” from Unit 2; and “accurate” and “relevant” from Unit 4 (Ward & Gramer, 2020). The basic format of the worksheets using SKELL includes activities such as searching the target vocabulary in *Examples* (i.e., observing the word in context), *Word Sketch* (i.e., finding collocations of the word), and *Similar Words* (i.e., checking synonymous words).

Table 1 describes Worksheets 7 and 8, which focus on the words “accurate” and “relevant,” given in lessons in the 11th–13th weeks. See Appendix A for the worksheets.

**Table 1**

*Description of DDL Activities in Worksheets 7 and 8*

Lesson	Worksheet	Corpus	Activities
Lesson 11	Worksheet 7 (25 minutes in class)	BNC	<ul style="list-style-type: none"> <li>• Check the contexts of the target vocabulary (“accurate” and “relevant”) in the coursebook</li> <li>• Find 10 collocations</li> <li>• Find frequent co-occurring prepositions, write down the example phrases, and summarize the findings</li> </ul>
Homework	Worksheet 8	SKELL	<ul style="list-style-type: none"> <li>• Re-check the contexts in the coursebook</li> <li>• Find collocations with <i>Word Sketch</i> and summarize the findings</li> <li>• Find synonyms with <i>Similar Words</i> and summarize the findings</li> <li>• Write reflections on the activities and the findings of the vocabulary using BNC and SKELL</li> </ul>
Lesson 12	Teacher’s Feedback on Worksheet 7	N/A	<ul style="list-style-type: none"> <li>• Teacher shows the entries of the vocabulary from the Longman Dictionary of Contemporary English Online (English-Japanese)</li> <li>• Teacher shows some students’ findings in the worksheet as model answers</li> </ul>

Lesson 13	Teacher's Feedback on Worksheet 8	Sketch Engine	Teacher shows some students' findings in the worksheet as model answers Teacher introduces the Sketch Engine and its output of <i>Word Sketch Difference</i> between "relevant" and "accurate," which visually depicts the co-occurring degrees of the target word and collocates
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Table 2 summarizes the participants' findings of the co-occurring prepositions of the target vocabulary and identification of the meanings in Japanese after observing the concordance lines (i.e., the target word in contexts) in Worksheet 7. The English translations are given in brackets.

**Table 2**

*Participants' Findings and Observations of Lexical Behaviors and Meanings in Worksheet 7 Using the BNC*

	"relevant"	"accurate"
Frequent prepositions co-occurring with the vocabulary	<ul style="list-style-type: none"> <li>• ...<u>relevant to</u> the potential drama student</li> <li>• ...<u>relevant for</u> the explanation of the character</li> <li>• ...<u>relevant in</u> an industrialised country</li> </ul>	<ul style="list-style-type: none"> <li>• The distance is <u>accurate to</u> within 1 cm at a range of 25 metres.</li> <li>• The mid-year estimates are <u>accurate for</u> natural change...</li> <li>• The advance has proved highly <u>accurate in</u> recognizing...</li> <li>• It turned out to be <u>accurate in</u> every respect.</li> </ul>
Observed lexical meanings	<ul style="list-style-type: none"> <li>• ~に関する、関連のある (related)</li> <li>• ~に適する、適切である (appropriate)</li> <li>• 妥当である (valid)</li> </ul>	<ul style="list-style-type: none"> <li>• 正確である (correct)</li> <li>➢ 正確な情報などを見分けるときの程度として使われる(どの程度の精度か)。 (It is used when identifying the degree of accuracy.)</li> <li>➢ データや図のようなものを表すものが多い。(The words representing data and diagrams are frequently collocated.)</li> <li>➢ 結果や情報の前につくことが多い。(It is frequently followed by words describing outcomes and information.)</li> <li>➢ toの後には誤差を表す数値が入る。(A small difference or error is placed after "to.")</li> <li>➢ in, toの後にはevery, decimal など数を表す単語がついている。(After "in" and "to," words expressing figures and numbers, such as "every" and "decimal," are given.)</li> </ul>

Table 3 shows the participants' findings of collocations derived from *Word Sketch* from the SKELL with the identification of the meanings of the vocabulary based on the concordance lines in Worksheet 8.

**Table 3**

*Participants' Findings and Observations of Lexical Behaviors and Meanings in Worksheet 8 Using SKELL*

Frequent collocates and observed meanings	“relevant”	“accurate”
Words with property X	<ul style="list-style-type: none"> <li>• 情報: <i>information</i></li> <li>• 証拠: <i>evidence</i></li> <li>• 話題、問題: <i>issue, topic, matter</i></li> </ul>	<ul style="list-style-type: none"> <li>• 情報: <i>information</i></li> <li>• 報告: <i>report, statement</i></li> <li>• 予測、見積もり: <i>prediction, estimate</i></li> <li>• 数字: <i>figure, percent</i></li> </ul>
Nouns modified by X	<ul style="list-style-type: none"> <li>• 情報、事実: <i>information, fact</i></li> <li>• 法令に関する語: <i>provision, registration, statute</i></li> <li>• 権限: <i>authority</i></li> </ul>	<ul style="list-style-type: none"> <li>• 情報、報告: <i>information, report</i></li> <li>• 測定、診断など医療関連のことで現在のことを表す語 (describing what is current in terms of medical care): <i>measurement, diagnosis, description</i></li> <li>• これからのことを予測させる語: <i>prediction, forecast</i></li> </ul>
Modifiers of X	<ul style="list-style-type: none"> <li>• 医療に関する語 (related to medical care): <i>clinically, physiologically, medically</i></li> <li>• 共同体に関する語 (related to community): <i>culturally, socially</i></li> <li>• 特に: <i>particularly, especially</i></li> </ul>	<ul style="list-style-type: none"> <li>• 学問に関する語 (related to academic areas): <i>historically, scientifically, medically, technically</i></li> <li>• 程度を表す語 (describing the degree): <i>reasonably, fairly, entirely, amazingly, surprisingly</i></li> </ul>

Table 4 shows the participants' reflections on a series of activities completed in Worksheet 8 using the BNC and SKELL. The reflections included their observations of the differences between “relevant” and “accurate,” which were unexpectedly provided, and comprehensive feedback on the DDL activities given in the course. All the comments were originally given in Japanese, but the English translations are only provided below.

The case study on Worksheets 7 and 8 shows that the participants autonomously derived lexical behaviors and meanings from the given concordance lines in the corpora without the teacher's explicit instructions. Engaging with abundant examples of the target vocabulary driven from the data in the corpora provided the participants with an opportunity to cultivate a deeper understanding of the vocabulary, which was enhanced by internalizing the meaning in their mother tongue, Japanese, and may not have been achieved from exercises given in the course book or consulting dictionaries. However, not all participants performed equally; 40% and 50% of the participants did not manage to complete all of the given exercises in Worksheets 7 and 8, respectively.

**Table 4***Participants' Reflections on Activities Using the BNC and SKELL*

Observed similarities between “accurate” and “relevant”	Observed differences between “accurate” and “relevant”
<ul style="list-style-type: none"> <li>• Having the same and/or similar meanings, prepositions, synonyms, and collocations</li> <li>• Describing information</li> <li>• Not used in everyday speech, such as those used in medical or work settings</li> <li>• “Relevant” meaning “related” is close to “accurate,” since it refers to correct information.</li> </ul>	<ul style="list-style-type: none"> <li>• “Relevant” means the results in the past tense, while “accurate” means the measurement in present.</li> <li>• “Relevant” refers to specific things, while “accurate” is often used with informational words.</li> </ul>
Comprehensive feedback on DDL activities	
<ul style="list-style-type: none"> <li>• I found it easy to search the vocabulary in the database but difficult to summarize the findings.</li> <li>• I was impressed to know that the vocabulary was used in so many different contexts and contained different meanings.</li> <li>• When I was a junior and high school student, I only learned the meanings of each word, but I came to realize that it was important to understand the core meanings of the word.</li> </ul>	

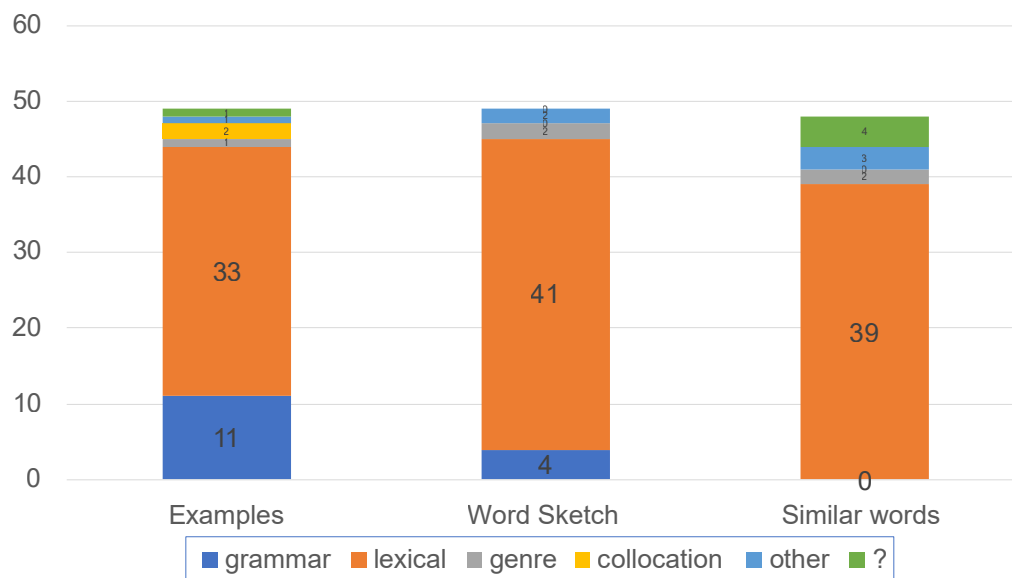
**DDL for CEFR B1–B2 EFL Learners (Level 2 Class)***Nouns*

The target nouns were “achievement,” “resolve,” and “version” (see Figure B1 in Appendix B). The participants were asked to write a sentence for each word provided as a prewriting activity. This initial step assessed their baseline understanding and usage of the words. The participants were instructed to write observations about each word, fostering deeper engagement with their meanings and usage. The next phase involved researching the verbs commonly associated with these target nouns as objects, with the participants noting any patterns or insights they discovered.

The participants were also asked to identify three synonyms for each word and write their findings. Finally, the task concluded with a post-writing exercise in which the participants wrote a sentence for each word again. This final step evaluated whether the participants’ understanding and use of the words had improved compared to the prewriting phase, thereby assessing the efficacy of the learning activities undertaken.

An analysis of the data indicated that while some grammatical insights amounted to approximately 10% from *Word Sketch* and 20% from *Examples*, most discoveries were related to lexical meanings (see Figure 1). Although prior research has reported the effectiveness of DDL in facilitating learners’ study of collocations (e.g., Saedakhtar et al., 2020; Vyatkina, 2016), in our research, the participants made very few discoveries related to collocations. This outcome highlighted that when the instructor did not specify the focus of discovery and left it to the learners, their attention tended to focus on lexical information.



**Figure 1***Types and Number of Discoveries Using SKELL: Noun Search*

There was no significant enhancement in the use of these collocations in written output, either before or after the intervention, as the students were unable to produce the target collocations effectively. According to Satake (2022), DDL promotes the retention of unfamiliar words and enhances the use of familiar ones, suggesting a discrepancy between acquisition and application. This finding raises the question of whether the words were entirely unknown to the learners or known only to a limited extent, with a vague understanding.

The activities designed to deepen lexical comprehension from multiple perspectives are valuable. However, they are time consuming and pose challenges in their implementation, which highlights the need to balance the depth of learning and practical classroom constraints.

### **Verbs**

The target verbs included “personify,” “perceive,” “empower,” “align,” “crave,” and “manipulate.” When the focus shifted to verbs as the learning targets, the learning tasks were largely similar to those employed for the abovementioned tasks, where nouns were the learning targets (see the Nouns section), with one notable exception: researching nouns commonly used with the target verbs. This task was designed to provide a more comprehensive understanding of the verbs by exploring their contextual usage with specific nouns, thus enhancing the learners’ grasp of practical verb-noun combinations in language applications.

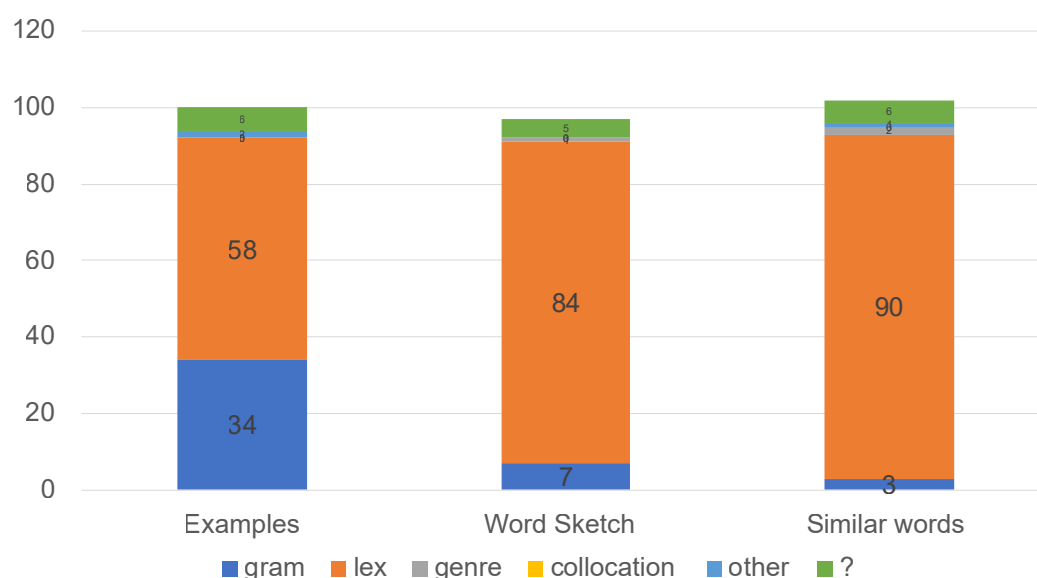
An analysis of learners’ interactions with *Examples* showed that approximately 35% of the findings pertained to grammatical insights (see Figure 2). It was observed that the tasks focusing on verbs resulted in more grammatical discoveries compared to those focusing on nouns (see Figure 1), which could be attributed to how verbs were researched. The target verbs were highlighted in red and centrally positioned in the concordance lines, making them

more conspicuous. This visual prominence might have facilitated a greater awareness and understanding of the grammatical structures surrounding these verbs, leading to more frequent identification of grammatical patterns. However, similar to when the focus was on nouns, most findings were predominantly related to lexical meanings, and the participants made very few discoveries related to collocations (see Figure 2).

Despite the potential for DDL to enhance usage, there was no significant increase in the use of these verbs in the participants' writing outputs. Since a notable proficiency was observed in the pre-intervention writing tasks in this group of participants, this outcome begs the question of whether dictionary use contributed to this initial success.

**Figure 2**

*Types and Number of Discoveries Using SKELL: Verb Search*



### ***Collocations***

The first task focused on a series of collocations from Daise and Norloff (2020), which included phrases such as “offer insight into,” “social media influencers,” “show resistance to,” “personal brand,” “see trends emerge,” “price-conscious,” “social good,” “good value,” “a person’s best interest,” “grab our attention,” “use an app,” “stream a service,” “browse a website,” “scroll through a Facebook feed,” and “turn off notifications.” The participants chose six collocations from the above target collocations. They then conducted a task that involved researching examples of these collocations, transcribing the examples they consulted, and using these transcribed examples as a basis for composing written texts. The task was implemented mainly in class, and the results were promising, with almost all students successfully incorporating these collocations into their written work. The results confirm the task’s potential as an effective method for promoting the use of known vocabulary within a short timeframe,

making it suitable for classroom instruction. In addition, unlike the learning processes for nouns and verbs (see the Nouns and Verbs sections), the participants could effectively acquire collocational knowledge when specifically instructed. This finding suggests that appropriate guidance is crucial for directing learners toward the desired learning objectives.

The second task centered on the “feel + noun” collocation structure (see Figure B2 in Appendix B). The participants investigated six “feel + noun” collocations, transcribed the examples they referred to, and created their own sentences using these transcribed examples as a reference. Conducted mainly in the classroom, the findings revealed that even learners at the B1–B2 level sometimes struggled to differentiate between nouns and adjectives and referred to “feel + adjective” collocations (e.g., feel fine), thus highlighting the benefits of specifying target collocations for instruction. Although there are instances where explicit instruction is unnecessary in the implementation of DDL (see DDL for CEFR A1–B1 EFL Learners, or Level 3 Class), situations do arise where such instruction is essential. Therefore, it is necessary to observe learners’ engagement carefully and respond flexibly. On the other hand, the participants showed an ability to learn the correct use of articles with nouns. The presence or absence of articles in collocations following the word “feel” varies depending on the noun used (e.g., feel an urge, feel sympathy). However, it was observed that by consulting examples, participants could discern between collocations with and without articles. This understanding enabled them to produce correct outputs frequently in their use of these collocations.

Overall, these findings indicate the value of DDL in collocation learning.

### ***Prefixes and Suffixes***

The target prefix was “anti,” and the target suffixes were “-ence,” “-ance,” and “-tion.” A significant finding was that approximately 80% of the students could correctly use the vocabulary with prefixes and suffixes in their English compositions after writing out example sentences. Approximately 20% of the responses correctly used the researched words, even though the participants did not write example sentences. This finding indicates that writing out example sentences of the referenced target phrases may not always be necessary to use the target phrases correctly. On the other hand, the DDL task was highly time consuming. To facilitate continuous implementation during classroom sessions, it is necessary to consider reducing the volume of the task. Doing so would optimize the balance between task efficacy and time management, ensuring students a more streamlined and effective learning experience.

## **Conclusion**

The implementation and analysis of DDL tasks in English classes, as described in this study, provided significant insights into the potential of DDL in language acquisition. The study’s findings underscore the effectiveness of DDL in enhancing the understanding of various language components, such as collocations, verbs, nouns, prefixes, and suffixes, within the

context of ELT in Japan.

A key takeaway from this research is the importance of targeted guidance in DDL tasks when learners do not properly understand the target vocabulary. When the participants were explicitly directed toward specific linguistic elements, such as collocations, their learning was more focused and effective. This highlights the need for well-structured DDL tasks that align with learners' language proficiency levels and learning objectives.

However, challenges were also noted regarding the time required to complete the DDL tasks, suggesting a need for optimization in task design that balances the depth of learning with practical classroom constraints to maintain learner engagement and facilitate continuous implementation.

Additionally, the study revealed that while DDL effectively promotes lexical comprehension and grammatical insights, its impact on the practical application of these learnings, such as writing, can vary. This finding highlights the necessity for further research and development of DDL methodologies that foster discovery and translate these discoveries into tangible language skills.

Overall, the research conducted at Rikkyo University demonstrates the potential of DDL in fostering autonomous, inductive learning among EFL students. The insights gained from this study contribute significantly to the broader understanding of DDL's role in language teaching and offer valuable guidance for English teachers in Japan seeking to incorporate corpus-based learning into their classrooms. The findings also lay a foundation for further research, particularly in optimizing DDL tasks for diverse learning environments and exploring their long-term impacts on language proficiency.

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## Appendices

### Appendix A: Worksheets for CEFR A1–B1 EFL Learners (Level 3 Class)

Figure A1

Worksheet 7

Vocabulary and Grammar Worksheet (VGW) 7	
1. 教科書 p. 84 と 85 から、relevant と accurate を使っている例文を書き出してみましょう。	
relevant	p. 84 p. 85
accurate	p. 84 p. 85
2. 立教大学図書館のデータベースから <b>BNC Online (小学館コーパスネットワーク)</b> にアクセスします。(大学のネットワークからでないとアクセスできません。)	
3. 上部左側の「 <b>コロケーション</b> 」をクリックし、検索窓に <b>relevant</b> または <b>accurate</b> を入力します。relevant と accurate と共によく使用される単語の表が出てきます。1 (右隣) の列に表示された単語はどんなものがあるか (単語以外は除く)、以下に <b>10 単語</b> を書き出してみましょう。	
relevant	
accurate	
4. BNC 上部右側の「 <b>共起語の品詞</b> 」をクリックし、新しく現れたウィンドウの「 <b>前置詞</b> 」に <input checked="" type="checkbox"/> を入れ、上部右側の「 <b>検索条件に追加する</b> 」をクリックします。(現れたウィンドウが消えます)。	
5. 「 <b>検索</b> 」をクリックします。relevant と accurate と共によく使用される前置詞の表が出てきます。1 (右隣) の列に表示された前置詞のうち高頻度のものを3件クリックして用例 (文、節、語句) を観察して引用してみましょう。また気づいたこと書いてみてください。	
relevant	
前置詞 (1)	
用例	
前置詞 (2)	
用例	
前置詞 (3)	
用例	
気づいたこと	
accurate	
前置詞 (1)	
用例	
前置詞 (2)	
用例	
前置詞 (3)	
用例	
気づいたこと	

## Figure A2

## Worksheet 8

## Vocabulary and Grammar Worksheet (VGW) 8 (HOMEWORK)

言語学習支援ツール SKELL (<https://skell.sketchengine.eu/#home?lang=en>)で **relevant** と **accurate** について調べ、理解を深めましょう。検索窓に“relevant”または“accurate”と入力し、Enter を押します。

- Finally, the ad must be **accurate**. (p. 84)
- If you plan to study in a financial area such as accounting, you need to make sure that your work is always **accurate**. (p. 85)
- Wouldn't you rather receive ads for products or activities that are **relevant** to who you are? (p. 84)
- Jack's question at the meeting was not **relevant** to our discussion of low sales; it was completely off topic.

(1) 検索語を入れ、検索窓の下の、“Word sketch”をクリックし、relevant または accurate の主語 (words with property X)、副詞 (modifiers of X)、名詞 (nouns modified by X) になる語について、具体例を数個挙げ、また気づいたことを書きましょう。

relevant
主語 (words with property X)
副詞 (modifiers of X)
名詞 (nouns modified by X)

accurate
主語 (words with property X)
副詞 (modifiers of X)
名詞 (nouns modified by X)

(2) 検索窓の下の、“Similar words”をクリックし、relevant および accurate の類義語を数個書き、気づいたことを書きましょう。

relevant の類義語について
accurate の類義語について

(3) relevant と accurate について、BNC オンラインや SKELL のデータベースを調べてみましたが、全体的な感想や気づいたことについて、以下に書いてください。

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## Appendix B: Worksheets for CEFR B1–B2 EFL Learners (Level 2 Class)

### Figure B1

#### Example of Participants' Completed Noun-Learning Worksheets

Worksheet: achievement, resolve, version

Name \_\_\_\_\_

(1) Write one sentence for each of the following words: achievement, resolve, version.

1	He practices everyday towards the achievement of his goal.
2	He resolved to go to America to study.
3	This is a new version of the song.

Please access SKELL (<https://skell.sketchengine.eu/#home?lang=en>), which is a language learning support tool. Type the target words in the search window.

(2) Write down one thing you notice about each of the words.

1	It means getting through
2	It means to solve or reconsider and decide
3	It represents various kinds of things or vision

(3) Click “Word sketch,” and look up the verbs that have those words as objects and write down what you notice.

1	These verbs have a common image that something can be accomplished or released.
2	These verbs represent negative meanings or conflicting appearances.
3	These represent a range or limitation.

(4) Click “Similar words,” and write three synonyms and what you notice.

1	success accomplishment progress →These have positive meaning and is stepping up.
2	tenacity perseverance fortitude →They express a feeling of patience and stubbornness.
3	model set feature →They express a feeling of patience and stubbornness.

(5) Write one sentence using each of the target words.

1	He have own achievement
2	The committee resolved that the step should be authorized.
3	I watched the English Version of the movie



**Figure B2***Example of Participants' Completed Worksheets for "feel + noun" Collocations*

## Worksheet

Name

p.67 Vocabulary Skill Review: feel+noun(名詞)のコロケーションを SKELL で 6 つ調べ、参照した用例を書き抜き、書き抜いた用例を参考に作文しましょう。

SKELL

<https://skell.sketchengine.eu/#home?lang=en>

1	用例	They may feel guilt when this initiative does not produce desired results.
	作文	I feel a sense of guilt now.
2	用例	Such pressure was widely felt by many schools.
	作文	I feel pressure to do presentation.
3	用例	The reader feels sympathy and compassion for her.
	作文	I feel sympathy for him.
4	用例	I did some light work and felt fine.
	作文	I felt fine yesterday because I don't work much.
5	用例	I felt a deep love for this beautiful place
	作文	I feel a great love.
6	用例	Kate felt an urge to tell him to get stuffed
	作文	He feel an urge to study math.