# Second Language Vocabulary Learning： Whether Western Music is Effective for Incidental Vocabulary Learning 

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## Introduction

English is a common language and learned all over the world．Japan introduced English as a subject in school for teenagers since 1886 （Erikawa，1996）．Vocabulary is considered as one of the most essential elements for success in communication in English（Gass \＆Selinker，2008；Lewis 1993）．There are two types of strategies for learning vocabulary；intentional learning and incidental learning．Nation（2013）states，
＂Intentional learning occurs when a learner deliberately decides to learn a particular word or group of words and focuses on this learning＂（p．307）．He also explained，
＂Incidental vocabulary learning occurs when the learning or communication goal is on something else like comprehension of the text or the conveying of a message，but vocabulary is picked up during the activity＂（p．307）．This thesis deals with the latter method，with a focus on the vocabulary coverage of the Western music．Many classrooms in Japan introduced the Western music as English teaching materials（Mori， 2014；Kobayashi，2003）．This study investigates whether the Western music is effective for learning English vocabulary incidentally．

## Literature Review

## Importance of Vocabulary for Second Language Acquisition

Knowledge of vocabulary is very important to acquire various language skills， according to Schmitt（2000）．In communication，even if a speaker makes a grammatical mistake，they will manage to make themselves understood，however a listener cannot tell what they mean if making a lexical mistake．Lewis（1993）put this in a stronger way by stating that＂Language consists of grammaticalised lexis，not lexicalized grammar＂
(p.51). Gass and Selinker (2008) also state that vocabulary might be the most important component for second language learners. Therefore, English language learners must devote considerable time and effort to vocabulary study.

## Number of Words Needed

## How Many Words Are Needed in Writing and Reading?

Laufer and Ravenhorst-Kalovsk (2010) state $95 \%$ of vocabulary coverage is needed to ensure academic reading comprehension, and found that 4,000-5,000 word-families are enough for sufficient understanding. Word-families differ from words. Schmitt (2000) defined, "A word family is usually held to include the base word, all of its inflections, and its common derivatives" (p.2). For example, respect, respects, respectful, respective and respectively are all included in one word-family. On the other hand, respect, respects, respectful, respective and respectively are counted as five word-forms. However, $98 \%$ of lexical knowledge gives learners higher level of comprehension and may require 8,000 word-families (Laufer \& Ravenhorst-Kalovsk, 2010). Nation (2006) investigated the British National Corpus (BNC) list and how much vocabulary is needed to get 98\% coverage of written texts. From the results, it was found that if a learner wants to get $98 \%$ coverage, 8,000-9,000 word-families are needed for dealing with written text, so these findings were in line with those of Laufer and Ravenhorst-Kalovsk (2010).

## How Many Words Are Needed in Speaking and Listening?

Nation (2006) also concluded that 6,000-7,000 word-families are needed to deal with spoken text if learners want to get $98 \%$ coverage. However, Nation (2013) found that if a learner would like to get 95\% coverage, only 2,000 word-families are needed for dealing with listening materials. However, $98 \%$ of lexical knowledge gives learners a higher level of comprehension.

## Word Lists

Considering the circumstances mentioned above, learning vocabulary is very important for second language acquisition and learners should spend considerable time to study vocabulary to comprehend written and spoken texts adequately. Moreover,
learners should learn frequency-based words. There are some word lists that arrange word according to their frequency, such as, the General Service List (GSL), Academic Word List (AWL), New General Service List (NGSL), New Academic Word List (NAWL), British National Corpus (BNC), and the Corpus of Contemporary American English (COCA). They contain high-frequency words which often appear in any texts (Nation, 2013). High-frequency words include function words and content words. While the GSL and NGSL deal with words which are used in daily life, the AWL and NAWL collected words from academic sources, such as articles, books, and lectures. The GSL includes around 2,000 word-families, the AWL has 570, the BNC has 20,000, and COCA has 8,000. The NGSL contains around 2,800 modified lemmas, and NAWL around 1,000. In addition, it should also be remembered that there is a difference of coverage between word-families and lemmas. The former counts derivatives as "one word." Perfectly and perfection, for example, are derivatives of perfect and they are "one" word-family. By contrast, the latter does not cover them, and includes conjugated words. Go conjugates goes, went, gone, and going and they are "one" lemma. Sometimes lemmas are called "headings".

## Vocabulary Study Methods

## Deliberate Vocabulary Learning

There are two types of strategies for learning vocabulary; deliberate learning and incidental learning. Deliberate learning is also known as intentional learning. Nation (2013) states that, "Intentional learning occurs when a learner deliberately decides to learn a particular word or group of words and focuses on this learning" (p.307). According to Barcroft (2015), "Intentional vocabulary learning ... refers to learning new words while consciously attempting to do so, such as when studying a list of new words, trying to learn new words while viewing word-picture pairs, or consciously attempting to learn new words from context while reading a text" (p.25). If a person learns vocabulary, for example, through using dictionaries, word cards, notebooks, or word lists, it is deliberate learning. Many researches state that deliberate vocabulary learning is effective. Komachali \& Khodareza (2012) investigated the effect of using flash cards, Hirschel \& Fritz (2013) investigated Computer Assisted Language Learning (CALL)
and notebooks, and Luppescu \& Day (1993) investigated dictionaries. All of them conclude each of the materials is effective for learning vocabulary. In addition, many studies have shown that deliberate vocabulary study is a quick and efficient method of learning many new words (Nation, 2013; Schmitt, 2000).

However, while deliberate vocabulary learning is an effective method for quickly learning many new words, it seems to be boring and not motivating for learners (Wilkinson, 2015). This is a big problem because motivation is widely viewed as important for language learning, including vocabulary. Lasagabaster, Doiz, and Sierra, (2014) state "Motivation has been thought to be key in language learning" (p.140). For vocabulary learning, it is necessary to have a motivation in order to devote the repeated and continuous effort needed to master the thousands of words needed for L2 success (Nation, 2013; Schmitt, 2000). Therefore, many researchers and experts believe it is important to also do more enjoyable vocabulary learning activities under what is termed incidental vocabulary learning.

## Incidental Vocabulary Learning

Nation (2013) defined incidental vocabulary learning occurs when the learning goal is to comprehend the text or the message, but vocabulary is picked up during the activity. Barcroft (2015) states "Incidental vocabulary learning refers to acquiring new words from context without intending to do so, such as when engaging in a conversation or reading a text for meaning and processing new words as input and inferring their meanings" (p.25). Through reading a book, watching a movie, or listening to music, for example, vocabulary or compound knowledge of previously studied words can be incidentally learned.

Incidental learning is not so good for learning many words, but it is very good for increasing knowledge of known words (Nation, 2013). In incidental vocabulary learning, learners see or listen to the words which are used practically in a sentence or idiom, so they can learn spelling, how to use them, and pronunciation as well as the meaning. Several researches suggest that incidental vocabulary learning is effective for extending learner's vocabulary (Day, Omura, \& Hiramatsu, 1991, Vidal, 2003). In addition, it is more interesting for learners than deliberate learning because materials of incidental
learning have contexts. Therefore, it is more motivating and easier to do one extended periods. Considering the above, this thesis focused on incidental vocabulary learning.

## The Four Strands

Nation (2013) suggested four important strands of learning vocabulary; meaningfocused input, language-focused learning, meaning-focused output, and fluency development. First, meaning-focused input is a learning style where learners gain new language items through listening and reading activities. This thesis is focuses on this learning strand. Second, language-focused learning is the direct learning of vocabulary. Third, meaning-focused output is to develop the knowledge of previously met vocabulary through speaking and writing activities. Finally, fluency development is the activity which enables learners to become more fluent in using items they already know. These four strands need to be equally represented. According to research by Vidal (2003), not all words are retained in long-term memory though learners study intensively, unless a variety of vocabulary activities are carried out. In other words, learners should study equally by intentional and incidental way of learning vocabulary.

## Review of Research on Incidental Vocabulary Learning

Day, Omura, and Hiramatsu (1991) investigated incidental English as a foreign language (EFL) vocabulary learning through reading. The study aimed to show whether students studying EFL could learn significant amounts of vocabulary incidentally from reading. The participants were 191 Japanese private high school students, and 397 first- or second-year university students in western Japan. The researchers divided them into two groups randomly. The treatment group subjects read the story, "Mystery of the African Mask" first, and then they were given a vocabulary test. A control group of subjects were simply given the vocabulary test. The researchers scored them referring to the study done by Pitts et al (correct $=1$, incorrect $=-0.33$, I don't know $=0$ ). In the terms of the results, the scores of the treatment group (high school: $\mathrm{M}=5.2$, $\mathrm{SD}=3.2$; university: $\mathrm{M}=9.3, \mathrm{SD}=3.4$ ) were significantly higher than the control group (high school: $\mathrm{M}=4.1, \mathrm{SD}=2.5$; university: $\mathrm{M}=6.3, \mathrm{SD}=3.0, \mathrm{p}<$ 0.01 ). The researchers concluded that foreign language students can learn target
vocabulary through reading.
Vidal (2003) investigated about incidental vocabulary learning through academic listening. The participants were 116 first-year university students who were attending an English course for specific purposes in Spain. The researcher used three videotapes of a recorded native speaker's lecture and that were related to the students' majors, and they included approximately 1800 tokens and 36 technical, academic, and low-frequency target words. The subjects took pre-tests, and received three 15-minute lectures within a four-week period. After that, they had to answer three true-false questions and listening cloze tests. A month later, the researcher took delayed post-tests. They were scored according to previous researches and the Vocabulary Knowledge Scale. The researcher analyzed the descriptive statistics and ANCOVA results with repeated measures. The scores of the immediate vocabulary post-tests $(M=30.4, \mathrm{SD}=1.4)$ were significantly higher than those of pre-test $(M=1.5, S D=0.3, p<0.01)$. However, there was a significant decline on the delayed post-test $(\mathrm{M}=16.4, \mathrm{SD}=1.1, \mathrm{p}<0.01)$. The researcher concluded that listening to the EFL lectures resulted in vocabulary learning, but not all the vocabulary gained by listening to the lectures was retained in long-term memory.

Webb and Rodgers (2009) investigated movies to determine whether they can be a valuable source of L2 aural input. They analyzed 318 British and American movies, using the RANGE software. In terms of results, there were $2,841,887$ running words in total, and on average, one movie had 8,937 running words. The top 3,000 word-families plus proper nouns and marginal words, which are words with no meaning such as "oh" and "ah," provided $95 \%$ coverage of vocabulary in the movies, and the top 6,000 wordfamilies provided $98 \%$ coverage. The percentages below include proper nouns and marginal words. American movies included 2,655,201 running words in total and they reached $95.76 \%$ coverage at the top 3,000 -word level, and $98.14 \%$ with 6,000 words. British movies included 186,686 words and they reached $95.50 \%$ with 3,000 words, and $98.29 \%$ with 7,000 words. As mentioned, all genres reached $95 \%$ coverage with the most frequent 3,000 -word level plus proper nouns. However, the word level needed to reach $98 \%$ coverage ranged widely among genres, from 5,000 to 10,000 words. The lowest was horror ( $98.17 \%$ at the 5,000 -word level). From this, it was found horror had
the smallest vocabulary size. Overall, the researchers concluded that movies may be an appropriate L2 resource for many learners.

## Western Music as a Listening Material

Mori (2014) used Western music in his classes and reported what he did in the class. The purpose of this paper was to think about the effects of using English songs in classes, and to suggest how to use them in order to promote self-learning. He used over 200 English songs as teaching materials in his classes and gave a questionnaire to students about their perceptions of using English songs to learn English. The participants were 147 third- or fourth-year students at Fukui prefectural university. He added up and analyzed the questionnaire data. The results showed that using English songs raised learner's motivation because it stimulated their desire to learn. In addition, he introduced a web "Lyrics Training", which helped learners to practice listening and dictation. He also recommended a translation contest of English music such as the one held in his university. He concluded the Western music had potential to train listening, speaking, reading, and writing skills if used correctly.

## Summary and Expansion

As seen above, learning vocabulary is central to second language acquisition. There are two main strategies to learn vocabulary: intentional and incidental learning. The former is good for quickly learning many new words, but it seems to be boring and not motivating for learners. On the other hand, the latter is good for increasing knowledge of known words, and it seems to be interesting for learners. This research focuses on incidental vocabulary learning because (a) motivation is very important for learning, and (b) very little research has been carried out to identify suitable incidental listening material. In addition, while incidental learning is largely carried out through reading, writing and listening, the amount of the materials related to listening is smaller than those related to other kinds of incidental learning. Kobayashi (2003) states many classrooms in Japan have introduced Western music as English teaching materials. Therefore, this thesis investigated whether Western music is suitable for incidental vocabulary learning; do high-frequency vocabulary items provide good coverage of the

Western music vocabulary? Five research questions were formulated in this study.

## Research Questions

(1) What genre of Western music is the most popular among Tokyo Woman's Christian University students?
(2) What do students think about using Western music as a language teaching/ leaning material?
(3) How many words are needed to reach $95 \%$ and $98 \%$ coverage of Western music?
(4) Approximately how many words in songs would be unknown at $95 \%$ and $98 \%$ coverage?
(5) Overall, is Western music a suitable source of incidental vocabulary learning for Japanese university students?

## Methods

## Participants

First, a questionnaire was administered to decide the listening materials for this research. The participants were 90 first to fourth-year students in Tokyo Woman's Christian University (TWCU). They came from various departments including Linguistics, English Literature and Culture, International Relations, History, Economics, Communication Studies, Psychology, Philosophy, and Japanese Literature. Their level of English proficiency varied widely from beginner to advanced. In the questionnaire, there were some questions about their favorite singers, frequency of listening to Western music, and their opinions about using Western music as EFL listening material. It was administered during regular class time and it took five to ten minutes.

## Materials

According to Table 1, pop music was the most popular genre and $90 \%$ of students regularly listened to the Western pop music. In this study, the materials were chosen on the basis of the result of the questionnaire. Therefore, 121 pop songs were chosen used in this experiment. In addition, these songs lyrics were picked up by referring to a

## Table 1. The results of question 1: What type of the Western music do you listen to?

| Genre of the Western music | Votes | \% of total sample (N=90) |
| :---: | :---: | :---: |
| Pop | 81 | 90.0 |
| Rock | 26 | 28.9 |
| Jazz | 12 | 13.3 |
| Country | 10 | 11.1 |
| Anime song | 10 | 11.1 |
| Rap | 6 | 6.7 |
| Classic | 1 | 1.1 |

Japanese website "Reco-Choku"; anyone can buy and download any songs from this website and it ranks these songs according to how many times they are downloaded in a day, a week, or a month. The monthly ranking of August, 2017 was referred to in this article. As the songs in the ranking were matched well to the result of the questionnaire, it can be said that using this ranking is appropriate. Lyrics are mainly quoted from google play. It was made sure that the lyrics were correct by actually listening to the song while reading the lyrics. All singers of the materials are American, British, or Canadian.

## Analysis

Song lyrics were input into a computer in order to make clean transcripts, and they were converted into a text file. They were analyzed by using Compleat Lexical Tutor which can be used freely on the web. The original data included words with: (1) no meaning such as emotional words like "oh", "ah", and "hoo", (2) proper nouns; (a) human names, (b) place names, (c) company and organization's names, (3) nonEnglish language words, and (4) spoken shortened form such as "lovin", "havin", "gonna", and "wanna". The data was cleaned over a number of stages and analyzed each time.

## Results

## Research Question 1: What Genre of the Western Music is the Most Popular among TWCU Students?

As mentioned above, the answer to this question was pop music. According to the questionnaire, it was found that $90.0 \%$ of the participants liked pop, followed by rock (28.9\%), Jazz (13.3\%), country (11.1\%), Anime songs (11.1\%), rap (6.7\%), and others, including classical music (1.1\%) (Table 1). The questionnaire also asked about singers and songs which the participants liked or often listened to and the results were matched well to the ranking reported by Reco-Choku.

## Research Question 2: What Do Students Think about Using the Western Music as a Language Teaching / Leaning Material?

The questionnaire was given mainly to search what genre of music students listen to, however, it also contained other questions. First, it asked participants whether they like English songs. 79 of 90 students ( $87.8 \%$ ) answered that they like English music, and 11 answered that they did not (Figure 1). Second, regarding the frequency of listening to the English music, there were three students who said that they had never listened to it, nine students who rarely listened, 24 students who listened several times a month, 33

$\square$ Yes $\quad$ No
Figure 1. Whether participants like English songs or not. 90 students answered.


■ Never ■ Rarely - Monthly ■ Weekly ■ Every day
Figure 2. Frequency of listening to the English music. 90 students answered. The number on the graph represents how many people chose respective items.
students who listened several times a week, 21 students who listened every day (Figure 2). Overall, $86.7 \%$ listened to English songs more than a few times a month.

Third, there was a question which asked whether they could understand the lyrics of the English music only by listening to it. 34 students answered that they could not understand much, 16 students could hardly understand anything, and one student could not at all. On the other hand, 34 students answered that they could understand the lyrics quite well, four students could understand almost all, and one student perfectly (Figure $3)$.

Fourth, the questionnaire asked why the students thought it was difficult to understand English-language lyrics. The bulk of the answers was speed of speech. The participants could choose more than two options and "speed of speech" got 75 votes and accounted for $83.3 \%$ of the participants. It was followed by vocabulary ( 25 votes), grammar (17), accent (13), and others (10) (Table 2). Others included rhythm, pronunciation of native speakers, implications, and lyrics including incorrect grammar.

Finally, the questionnaire asked them what they thought about using English music as a listening material. 69 people thought that using it was useful to improve English


- Not at all ■ Hardly ■ Not much ■ Quite well ■ Almost all ■ Perfectly

Figure 3. Whether students could understand the lyrics of the English music only by listening to it. 90 students answered. The number on the graph represents how many people chose respective items.

Table 2. Why the students thought it was difficult to understand English-language lyrics.

|  | Votes | \% of total sample (N=90) |
| :--- | :--- | :--- |
| Speed of speech | 75 | 83.3 |
| Vocabulary | 25 | 27.8 |
| Grammar | 17 | 18.9 |
| Accent | 13 | 14.4 |
| Others | 10 | 11.1 |

skills, but five did not think so. 13 people answered whether it was good or not depended on the situation (Figure 4). Three people did not answer the question.

The participants who thought it was good to use the English music as listening materials said the following reasons: first, the listener can get used to the pronunciation of native speakers by listening to the music, and learn the sense of rhythm in English and how to omit in pronunciation. Second, listening to the music would improve listening


$$
■ \text { Good ■ On the situation } \quad \text { Not good ■ No answer }
$$

Figure 4. How students thought about using English music as a listening material. 90 students answered. The number on the graph represents how many people chose respective items.
skills by getting accustomed to listening to spoken English. Third, on the other hand, learners can improve the speaking skill by singing English songs. Fourth, songs enable the listeners to learn vocabulary as phrases, not as individual words. Fifth, the learners who like to listen to the Western music can get motivation to learn English and they can easily continue to learn it. In addition, listening to their favorite song repeatedly would lead to repetitive practice of listening in English. Sixth, listening to the Western music may give the opportunity to look up a word in a dictionary and to understand the different culture. Actually, some participants reported that their English vocabulary and listening skills had improved by listening to English songs.

Besides, there were some students who thought listening to the Western music was effective if the learners understood the lyrics beforehand, or if they tried to understand the lyrics consciously. Other students' thoughts included the following: listening to music could become a motivation for learning English, and it might be used in the introduction of learning English. They also thought that while learning English grammar and practicing speaking English are impossible only by listening to the songs, it is good for learning English accents and vocabulary. Also, there were students who answered that slow and easy-to-hear songs were suitable for learning English.

On the contrary, the reason for the participants who thought that it was not good to learn English through listening to music was because the listener would not pay attention to the lyrics but just enjoy the music. In addition, some participants thought that this kind of learning style demanded that the learner was interested in the Western music, or they also thought that listening to the music alone would not improve the English skill.

## Research Question 3: How Many Words Are Needed to Reach 95\% and 98\% Coverage of the Western Music?

## Stage 1: Raw Data

It was found that there was $91.77 \%$ coverage in the original data (Table 3). This means that if learners know the NGSL and NAWL they will know $91.77 \%$ of the words in the English songs that this thesis compiled. $91.77 \%$ coverage is not enough for sufficient understanding in listening materials (Nation, 2013). However, the original data had words which could and should be deleted as mentioned in 3.3 (1)-(4).

Table 3. The results of analyzing after stage 1

|  | NGSL-1 | NGSL-2 | NGSL-3 | NAWL | Off-List |
| :--- | :--- | :--- | :--- | :--- | :---: |
| Cumulative <br> coverage (\%) | 85.92 | 89.50 | 91.41 | 91.77 | 99.99 |

## Stage 2: Deletion of Words with No Meaning

In stage 2, the words which had no meaning were removed from the original data, for example, "ooh" and "ah". These words were emotional expressions and it can be assumed that a listener can understand these words have no important meaning even if he or she does not have knowledge of the language, because these words are used to get into the rhythm or to sing pleasantly (Nation, 2013). The coverage provided by the NGSL and NAWL was $94.89 \%$ after these words were removed (Table 4). This is extremely close to, or even at the $95 \%$ target level as set out by Nation $(2006,2013)$.

Table 4. The results of analyzing after stage 2

|  | NGSL-1 | NGSL-2 | NGSL-3 | NAWL | Off-List |
| :--- | :--- | :--- | :--- | :--- | :---: |
| Cumulative <br> coverage (\%) | 88.83 | 92.53 | 94.51 | 94.89 | 100.00 |

## Stage 3: Deletion of Proper Nouns

In stage 3, proper nouns were removed from the words left after stage 2. Proper nouns have three types: (a) human names, (b) place names, and (c) company and organization's names. The coverage reached $95.27 \%$ after stage $3 \mathrm{a}, 95.42 \%$ after stage 3b, and $95.46 \%$ after stage 3c (Table 5). Therefore, after this stage, the coverage was at or just over the $95 \%$ threshold that Nation (2013) states is needed to understand listening materials sufficiently.

Table 5. The results of analyzing after stage 3

| Cumulative <br> coverage (\%) | NGSL-1 | NGSL-2 | NGSL-3 | NAWL | Off-List |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Stage 3a | 89.19 | 92.91 | 94.89 | 95.27 | 100.00 |
| Stage 3b | 89.32 | 93.05 | 95.04 | 95.42 | 100.00 |
| Stage 3c | 89.36 | 93.09 | 95.08 | 95.46 | 100.00 |

## Stage 4: Deletion of Non-English Language Words

In stage 4, non-English language words such as Italian, French, and Latin were excluded because they were at odds with the objective of learning English. The coverage was $95.50 \%$ after this stage (Table 6), which is an increase of only 0.04 percent, so there were clearly few of these words in English-language songs.

Table 6. The results of analyzing after stage 4

|  | NGSL-1 | NGSL-2 | NGSL-3 | NAWL | Off-List |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Cumulative <br> coverage (\%) | 89.40 | 93.13 | 95.12 | 95.50 | 100.00 |

## Stage 5: Deletion of Spoken Shortened Form

Spoken shortened forms were corrected in stage 5. Most of the corrected words were ending in "-in""; and they were corrected to "-ing". For example, "thinkin"," movin", and "takin". It was common to use "-in" rather than "-ing" because almost all "-ing" words were written as "-in" in the lyrics. It seemed that these modifications were justified because there was little difference of pronunciation between "-in" and "-ing" and listeners would understand them. After these words were corrected, the coverage provided by the NGSL and NAWL reached 96.71\% (Table 7). It is found that learners can get $95 \%$ coverage if they have known $2,000-3,000$ words. However, the percentage is not as high as the $98 \%$ level (Table 8).

Table 7. The results of analyzing after stage 5

|  | NGSL-1 | NGSL-2 | NGSL-3 | NAWL | Off-List |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Cumulative <br> coverage (\%) | 90.58 | 94.33 | 96.33 | 96.71 | 100.00 |

Table 8. Summary of the results

|  | Stage 1 | Stage 2 | Stage 3 | Stage 4 | Stage 5 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Coverage (\%) | 91.77 | 94.89 | 95.46 | 95.50 | 96.71 |

## Research Question 4: Approximately How Many Words in Songs Would Be Unknown at 95\% and 98\% Coverage?

After stage 5, there were still about 700 words left in an off-word list. Those words were excluded from the analysis by the NGSL and NAWL. However, among them, there were words that seemed would already be known by Japanese students, such as goodbye, boyfriend, and bicycle. The reason why they were excluded might be because words in the NGSL and NAWL were gathered from written language such as books, articles, and lectures. In other words, these words were spoken form and those lists do not cover them.

To investigate whether students knew these words, a vocabulary test was designed
and implemented. The number of words deemed as being easy for Japanese university students was 225, and they were divided into three levels. The words in level 1 , for example, goodbye, elephant, and prince, had been studied by Japanese students from the beginning of English education. These words might be difficult if they try to write or read, but Japanese students can easily understand immediately if they hear the words spoken. Level 2 included the words often heard in Japan as loan words, such as mini, songwriter, and balcony. These words would be familiar to Japanese students in terms of the pronunciation and the meaning. In level 3 , there were words which it was thought that Japanese students often see or listen to in daily life, for example, daylight, bloom, and wallet. Level 1 has 65 words, level 2 has 57 words, and level 3 has 103 words.

To make the test, six words were extracted randomly from level-1, five words from level-2, and nine words from level-3. These numbers reflected the percentage of words included in each level. In total, the test included 20 words. On the test, those 20 chosen words were lined to the left, and the participants were asked to write on the right side Japanese words corresponding to the English words on the left side. This test was made by quite subjective criteria, but to some extent, it seemed to be a judgement material of whether students knew the words or not.

The participants of the test were 24 first to fourth-year students in Tokyo Woman's Christian University. They came from various departments including Linguistics, International Relations, Psychology, Philosophy, and their level of English proficiency varied widely from beginner to the advanced. However, most of the participants were first-year students studying linguistics. This is because it would be better to take this test to the beginners because the aim of the test was to investigate whether students knew especially relatively easy words for Japanese university students. In the test, 1 point was given if the student gave the correct answer to an item. If the student answered incorrectly, no point was given.

As a result, the mean score of level 1 was 5.50 ( $\max =6.00$ ), level 2 was 3.92 (max $=5.00)$, and level 3 was $6.08(\max =9.00)$. From this result, it could be thought that the students did not need to learn the words of level 1 again and the words of level 1 were ignored when making the off-word list. In the off-word list, the words excluded from the analysis are shown, including the words of level 2 and 3 . Then, off-word count
was 620 . This means if learners want to listen to English pop music, studying these 620 unknown words could be very helpful.

## Research Question 5: Is the Western Music a Suitable Source of Incidental Vocabulary Learning for Japanese University Students?

As a result of analyzing 121 pop songs, there was $91 \%$ coverage when looking at raw data. However, after the data were cleaned, the coverage reached $96 \%$. Around 700 words were excluded as off-word list. However, it was found from the result of the vocabulary test that 65 words could be deleted from the list. Therefore, the number of words in the off-word list became 620 , and about $60 \%$ of them were common words; they were included in the most frequently 5,000 words of BNC list, which contains words collected words from British news, books, and TV shows. Therefore, studying these words is not only useful for understanding English-language pop music, but also for watching TV and movies, and reading.

## Conclusion

Based on the results above, it can be said that Western music is effective for incidental vocabulary learning for three reasons. First, listening is classified as incidental vocabulary learning, and this is effective as mentioned in literature review. Second, according to the result of this paper, the most frequent 4,000 English words provided over $95 \%$ coverage in the lyrics of the English pop music analyzed. It is known that $95 \%$ coverage is needed for a learner to get sufficient understanding (Nation, 2013). Table 7 shows that learners can get $95 \%$ coverage if they know 2,000-3,000 words, and it is in line with the statement of Nation (2006). On the other hand, the coverage did not reach $98 \%$ which Laufer and Ravenhorst-Kalovsk (2010) state is needed to reach high-level comprehension. Nevertheless, it still can be said to be an efficient way to learn vocabulary incidentally. Third, it was found that many students liked English songs and they often listened to them. It is related to motivation to learn vocabulary. Motivation is important in learning vocabulary as mentioned in literature review. The learners who like to listen to Western music can get motivation to learn English and they can easily continue to learn it. In addition, listening to their favorite song repeatedly would lead to
repetitive practice of listening English. Repetition has been shown to have very positive effects on vocabulary knowledge and long-term memory (Nation, 2013). Another important support for using English songs for incidental learning is that there are few listening materials available at present that can be used for incidental vocabulary learning. This paper shows the possibility and potential benefits of using Western music as an English learning listening material.

Western music seems to be also effective for intentional vocabulary learning. If learners study the NGSL and NAWL, they can understand the words in English songs adequately. They can get deeper comprehension if they study the off-word list. This research suggests that learners should learn not only the NGSL and NAWL, but also the off-word list, $60 \%$ of which are included in the BNC.

## Discussion

These days, Western music can be heard anywhere, for example, in TV program, in stores, and on streets. From the results of the questionnaire, it was found that there were a lot of people who liked and often listened to English songs. In addition, many people thought that songs are suitable as a listening material. Considering these things, it seems meaningful to use Western music as a teaching material. Although some participants thought it was difficult to understand lyrics by only listening, this research showed that Western music included good vocabulary for incidental learning. Learners could possibly make listening to music easier by listening to music while watching the music video because they can get visual information.

However, this study also revealed many challenges about Western music as a teaching material. First was the speed of speech, as shown in the results of the questionnaire. This paper could not refer to the problem, but on the topic of vocabulary, it was concluded that Western music was effective. The second problem was that it was subjective how to choose a word that was excluded from the off-word list as simple words. In other words, the words on the off-word list were divided into four groups depending on their difficulty, but the way they were classified was based on the subjective opinion. Third, though many participants thought Western music would improve the listening or speaking skills, whether it is correct or incorrect was not
revealed in this article. In addition, it is also problematic that the pronunciation is different when singing and speaking normally. However, this study was only to investigate whether the vocabulary of the Western music was a suitable level to provide opportunities for incidental learning. Thus, further research is needed to examine whether regularly listening to the Western music can improve listening or speaking skills.

In addition, due to their popularity, Western songs could be considered as more interesting deliberate vocabulary learning material for lower level learners. When considering the selection of teaching material, it is important to try to provide learners with interesting material, so learners will in turn be interested in English and put effort into learning it. Through listening to music, people can be encouraged and given the opportunity to learn English vocabulary. Besides, the learners can learn English as they like. Some people may learn vocabulary through listening to music with seeing its lyrics and other students may increase their vocabulary through translating the lyrics into Japanese. In addition, people can also learn pronunciation and the English expression by listening to the songs. For the above reasons, Western music can be considered as a potentially effective learning material, but future researchers should study more deeply whether Western music can be used as a learning material or not in real educational contexts.

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## 要 旨

本論文の目的は洋楽が付随的語彙学習に有効かどうかを調べることである。付随的学習には様々な方法があることが先行研究（Nation，2013）でも明らかになっているが，本論文ではリス ニングの教材が他の方法における教材より少ないことに着目し，研究を進めた。そこで英語の授業でもよく使われている，洋楽の歌詞と，New General Service List（NGSL），New Academic Word List（NAWL）との一致率を調べた。

まず洋楽を聴く頻度や普段聞いているジャンルを問うアンケートの結果やウェブサイトのラ ンキングを参考に，日本人に人気のポップス121曲を調査の対象とし，その歌詞を Compleat Lexical Tutor で分析した。その結果，一致率は $96.71 \%$ だった。リーディングやリスニングにお いて，ある文章を理解しようとする際， $95 \%$ の語彙があればその文章を十分に理解できるという ことが知られている（Laufer \＆Ravenhorst－Kalovsk，2010；Nation，2013）。つまり今回の結果か ら，NGSL と NAWL に載っている単語を学習すれば，洋楽の歌詞は十分に理解できるというこ とが分かる。この分析から外れた単語はオフワードリストとして提示されているが，それを British National Corpus（BNC）と比較したところ，その 6 割が，BNC において頻度の高い部類 に入る単語であった。従って，このオフワードリストを勉強することで，洋楽だけでなく本やテ レビ番組など，他のメディアの理解にも役立つと言えるだろう。

また，アンケートの結果から被験者の多くが洋楽を好み，頻繁に聞いていると分かった。これ らのことから，洋楽は学習者の英語学習に対するモチベーションを高めるという意味でも，付随的な語彙学習に適した教材だと推察できる。その学習をさらに強化するために，学習者には NGSL，NAWL とともにこのオフワードリストの学習を推奨する。

