Incidental Vocabulary Learning Through Listening to Songs Using Participants of Different Vocabulary Sizes

Benjamin Sanchez Murillo

Temple University

Japan Campus

Tokyo Center

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Dr. Takumi Uchihara

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Introduction

Researchers have been continually exploring different spoken incidental vocabulary learning contexts that are readily available to students. These studies have investigated listening to songs (Medina, 1993; Tegge, 2018; Pavia et al., 2019) and listening to lectures (Vidal, 2011). Pavia et al. (2019) identified various benefits that songs can bring to the vocabulary learning area of studies. These benefits included large quantities of input availability, repetitive and conversation-like nature of songs, opportunities for encountering the same word multiple times, assisting in memory language acquisition, and decreasing anxiety. However, listening to songs (i.e., spoken) is one kind of study that has been relatively unexplored compared to written incidental vocabulary learning studies (e.g., Joe, 1998; Vidal, 2011; Pellicer-Sánchez & Schmitt, 2010; Pellicer-Sánchez, 2016). Therefore, incidental vocabulary learning through listening to songs is a topic that deserves further attention.

Literature Review

Nation (2020) distinguished receptive and productive knowledge as the expertise involved in knowing a word. He defined the knowledge needed for listening and reading as receptive knowledge and the knowledge necessary for speaking and writing as productive knowledge. Receptive and productive knowledge involves nine aspects within a form (i.e., spoken, written, word parts), meaning (i.e., form and meaning; concept and referents; associations), and use (i.e., grammatical functions, collocation, and constraints on use).

Medina (1993) identified two ways of acquiring vocabulary: intentional and incidental. However, because the focus of this paper will be on incidental vocabulary acquisition, intentional vocabulary acquisition will be minimally discussed. Uchihara et al. (2019) categorized incidental vocabulary learning as occurring because of meaning-focused activities and when participants participated in unanticipated vocabulary tests. This type of learning can be exhibited through written (Joe, 1998; Vidal, 2011; Pellicer-Sánchez & Schmitt, 2010; Pellicer-Sánchez, 2016) or spoken (Vidal, 2011; Baills, et al., 2021; Pavia et al., 2019; Uchihara et al., 2021) contexts. Although the frequency of encounters for lexical learning varied (Pavia et al., 2019; Uchihara et al., 2021), a common factor between these studies is that an increase in vocabulary learning coincided with an increase in input quantity. In other words, the more learners were exposed to vocabulary words, the more vocabulary knowledge they acquired.

In the Medina (1993) study, the researcher concluded that learning does occur from listening to songs; however, the study did not list any vocabulary gains her participants experienced. The results of the Medina (1993) study encouraged Pavia et al. (2019) to investigate the relationship between vocabulary gains and listening to songs. In Pavia et al. (2019), researchers examined the effects of listening to a single song one, three, or five times and the relationship between participants' opportunities to listen to target vocabulary items and learning gains. They found that listening to songs contributed to vocabulary learning and that the frequency of exposure affected learning gains. However, the participants in this study knew approximately 430 of the most frequent 2,000 words using a bilingual version of a Vocabulary Levels Test, indicating that participants were at a beginner level of English proficiency.

Research Questions

One of the limitations that Pavia et al. (2019) listed was a lack of participants with varied vocabulary sizes. They mentioned that a study containing participants with different vocabulary sizes would better indicate their contribution to vocabulary learning. Therefore, this proposal attempts to replicate the Pavia et al. (2019) study, emphasizing participants of different vocabulary sizes. More specifically, this study seeks to answer the research questions below:

1. Does listening to songs contribute to L2 incidental vocabulary learning?
2. To what extent do Japanese learners with a beginner English proficiency affect knowledge of spoken-form recognition, form-meaning connection, and collocation recognition?
3. To what extent do Japanese learners with an intermediate English proficiency affect knowledge of spoken-form recognition, form-meaning connection, and collocation recognition?

Method

Participants

The type of participants that I intend to obtain for this study are 60 Japanese learners (25 males and 35 females) between 19 and 20 years old from a TOEIC preparation course at a private university in Central Japan. The students' English proficiency has not been measured, so I will administer the bilingual (English and Japanese) 1,000 and 2,000 Vocabulary Levels Test (VLT) to determine their VLT score and randomly assign them to an experimental and a control group.

The participants in Pavia et al. (2019) all achieved low scores on the 1,000 (i.e., $M = 8.57$, $SD = 4.36$) and 2,000 (i.e., $M = 4.39$, $SD = 2.88$) Vocabulary Levels Test (VLT) and were determined to be at a beginner level of English proficiency. However, Pavia et al. (2019) suggested that researchers use participants with different vocabulary sizes to understand better how listening to songs may contribute to vocabulary learning. Therefore, for this study, I will define beginner English proficiency levels for students who score below 1,500 and intermediate English proficiency for above 1,500. Those considered beginners will be placed in the control group and will not receive treatment. Those considered intermediate will be placed in the experimental group and will receive the treatment.

Instruments

Songs

Pavia et al. (2019) administered two songs as treatments for the experimental groups. Song A was titled "Every Breath you Take" by The Police (1983) (See Appendix A), and Song B was titled "Die a Happy Man" by Thomas Rhett (2015) (See Appendix B). The criteria Pavia et al. (2019) used to select the songs were that students were unfamiliar with the songs and were age-appropriate and interesting. These criteria were exercised to motivate learners and foster learning. Pavia et al. (2019) also analyzed the lexical coverage of both songs using Range (Heatley & Nation, 2002) and Nation's (2017) British National Corpus/Corpus of Contemporary American English (BNC/COCA) word family list. They found that both lyrics had at least a 95% coverage in the first 2,000-word families, and they considered that they were likely to be unknown to their participants. However, the English proficiency level of some of the participants in this study will probably be higher than participants in Pavia et al. (2019), so some of the words in the songs may be familiar to the university students in this study.

Multiple-choice Vocabulary Test

Like in Pavia et al. (2019), this study will use a multiple-choice vocabulary test (MCVT) as a pretest, immediate posttest, and delayed posttest to measure participants' different aspects of vocabulary knowledge (i.e., spoken-form recognition, form-meaning recognition, and collocation recognition). All questions will contain four options (i.e., one correct answer, two distracters, and an "I don't know" option. The types of questions used will resemble those asked in the Pavia et al. (2019) study. However, the prompts will be translated into Japanese. A representative sample of the MCVT sections are listed below:

Section A: Spoken-form Recognition Test
The participant will see the following prompt:

This question will be a measure of cognitive ability
Perception Test: Choose the correct answer from the sounds you hear.
    1. (A) Corsal (B) Single (C) Pustic (D) I don't remember anything

At the same time, the participant hears on the recording.
"Number one [1 sec]. A, Corsal [2 sec.] B, Single [2 sec.], C, Pustic [2 sec]"

Section B: Form-meaning Recognition Test
The participant sees on paper:
    B. Translation: Choose the word with the correct meaning from the sound you hear.
    1. (A) Dream (B) Breath (C) Embrace (D) I don't know

At the same time, the participant hears on the recording
"Number one [1 sec.] Embrace"

Section C: Collocation Recognition Test
The participant sees on paper:
    C. Matching: Match the correct words from the sounds you hear
    1. (A) (B) (C) (D) I don't remember anything

The two distracter words will be nonsense words. The use of nonsense words is so that participants do not recognize them. Pavia et al. (2019) created the nonsense words by changing the first letter of a low-frequency word and maintaining the number of syllables like the target words so that the words would not be chosen based on the word length. The target words in the MCVT will also consist of eight single-word items and eight collocations from Song A and 19 single-word items, and seven collocations from Song B.

In this study, the spoken-form recognition test will consist of eight multiple-choice items selected from Song A and 19 multiple-choice items from Song B. Once the test begins, the participants will hear a recording of three options (i.e., one correct answer and the two distracters). Participants will be able to match what they hear with the appropriate multiple-choice letter.

The form-meaning connection test will consist of eight multiple-choice items from Song A and 19 multiple-choice items from Song B. In this section, participants will hear a recording of one word from the songs in English and will try to match the Japanese translation equivalent.

The collocation recognition test will consist of eight multiple-choice items from Song A and seven-multiple choice items from Song B. In this section, the participants will hear three collocations and will be asked to identify the collocations they remember by matching them with the appropriate multiple-choice answer.

Vocabulary Levels Test (Bilingual)

Participants will complete the bilingual (English and Japanese) version of the Vocabulary Levels Test (See Appendix C). This test consists of 10 vocabulary questions at the 1,000 level and 20 vocabulary questions at the 2,000-word level. Like in Pavia et al. (2019), the vocabulary level will be determined by counting the number of correct answers in the test and multiplying the results by 33.3. The test results will determine the number of participants assigned to the experimental and control groups.

Procedure

The study will be conducted throughout 60-minute sessions for five weeks (See Appendix D). After the participants complete the VLT, they will be randomly assigned to four groups (i.e., three experimental groups and a control group). The VLT and pretest will be administered on week one (W1) for all groups. Week two (W2) will be the week when the immediate posttest for song A is administered, and when the experimental group one (EX1), experimental group three (EX3), and experimental group five (EX5) will listen to song A. Week three (W3) will be the week when the immediate posttest for song B is administered, and when the experimental group one (EX1), experimental group three (EX3), and experimental group five (EX5) will listen to song B. Week four (W4) will be song A's delayed posttest for all groups, and week five (W5) will be song B's delayed posttest also for all groups. EX1 will listen to each song once, EX3 will listen to each song three times, and EX5 will listen to each song five times.

Analysis

The results from the MCVTs (i.e., pretest, immediate posttest, and delayed posttest) will be collected, and a score of 1 will be awarded to a correct response. A score of 0 will be awarded to an incorrect answer. The scores for the MCVTs for the spoken-form recognition, immediate, form-meaning connection, and collocation recognition tests for the control group and experimental groups will then be added and compared to each other. The mean score and standard deviations will be calculated and organized in a table. The maximum achievable score for Song A will be a score of 8, and the maximum achievable score for Song B will be a score of 7.

Expected Results

In this study, for Song A and Song B, I expect to find a significant difference between scores from the pretest to the immediate posttest and from the pretest to the delayed posttest for the spoken-form recognition section, form-meaning connection section, and collocation recognition section from participants who had more song exposures and from participants with an intermediate English proficiency. Participants with a beginner English proficiency level will probably score lower than the intermediate English proficiency students. In Vidal (2011), the study results suggested that participants with higher English proficiency would learn more vocabulary. Therefore, I expect the results in this proposed study to reflect the Vidal (2011) study similarly.

Expected Pedagogical Implications

       Using songs to increase incidental vocabulary learning has resulted in vocabulary learning among beginner English proficiency students. The repeated exposure of single-word and multiword items makes songs an effective medium to deliver L2 input for vocabulary learning (Pavia et al., 2019). The results from this study will help clarify if similar gains can also be obtained with intermediate English proficiency level students, and if so, to what extent. Having empirical results will motivate teachers to implement repeated song listening in their vocabulary learning programs.

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Appendix A

SONG A
"Every Breath you Take" by The Police (1983)
The lyrics to this song can be found at: https://www.lyrics.com/lyric/1880091/The+Police

Every <u>breath</u> you take	Oh, can't you see
And <u>every</u> move you make	You <u>belong</u> to me?
Every bond you break, <u>every</u> step you take	How my poor <u>heart</u> aches
I'll be watchin' you	With <u>every</u> step you take
Every <u>single</u> day	
And <u>every</u> word you say	Every move you make
Every game you play, <u>every</u> night you stay	And <u>every</u> vow you break
I'll be watchin' you	Every <u>smile</u> you fake, <u>every</u> claim you stake
	I'll be watchin' you
Oh, can't you see	Every move you make, <u>every</u> step you take
You <u>belong</u> to me?	I'll be watchin' you
How my poor <u>heart</u> aches	
With <u>every</u> step you take	I'll be watchin' you
	Every <u>breath</u> you take, <u>every</u> move you make
Every move you make	Every bond you <u>break</u> (I'll be watchin' you)
And <u>every</u> vow you break	Every <u>single</u> day, <u>every</u> word you say
Every <u>smile</u> you fake, <u>every</u> claim you stake	Every game you play (I'll be watchin' you)
I'll be watchin' you	Every move you make, <u>every</u> vow you break
	Every <u>smile</u> you fake (I'll be watchin' you)
Since you've gone I've been lost <u>without</u> a trace	Every <u>single</u> day, <u>every</u> word you say
I <u>dream</u> at night, I can only see your face	Every game you play (I'll be watchin' you)
I look <u>around</u> but it's you I can't replace	Every <u>breath</u> you take, <u>every</u> move you make
I feel so cold and I long for your embrace	Every bond you <u>break</u> (I'll be watchin' you)
I keep cryin', "Baby, baby, please"	Every <u>single</u> day, <u>every</u> word you say
	Every game you play (I'll be watchin' you)
	Every move you make, <u>every</u> vow you break
	Every <u>smile</u> you fake (I'll be watchin' you)
	Every <u>single</u> day, <u>every</u> word you say
	Every game you play (I'll be watchin' you)

Appendix B

SONG B
"Die a Happy Man" by Thomas Rhett (2015)
The lyrics to this song can be found at: https://www.lyrics.com/lyric/33182008/Thomas+Rhett

Baby, last night was hands down	And I know that I can't ever tell you enough
One of the best nights	That all I need in this life is your crazy love
That I've had, no doubt	If I never get to see the Northern Lights
Between the bottle of wine	Or if I never get to see the Eiffel Tower at night
And the look in your eyes and the Marvin Gaye	Oh, if all I got is your hand in my hand
Then we danced in the dark under September stars in the pourin' rain	Baby, I could die a happy man, yeah, yeah, mmm
And I know that I can't ever tell you enough	I don't need no vacation, no fancy destination
That all I need in this life is your crazy love	Baby, you're my great escape
If I never get to see the Northern Lights	We could stay at home, listen to the radio
Or if I never get to see the Eiffel Tower at night	Dance around the fireplace
Oh, if all I got is your hand in my hand	Oh, if I never get to build my mansion in Georgia
Baby, I could die a happy man	Or drive a sports car up the coast of California
A happy man, baby, mmm	Oh, if all I got is your hand in my hand
Baby, that that red dress brings me to my knees	Baby, I could die a happy man
Oh, but that black dress makes it hard to breathe	Baby, I could die a happy man
You're a saint, you're a goddess, the cutest, the hottest, a masterpiece	Oh, I could die a happy man
It's too good to be true, nothing better than you	You know I could, girl
In my wildest dreams	I could die, I could die a happy man
	Mmm

Appendix C

Vocabulary Levels Test (VLT)
(https://www.wgtn.ac.nz/lals/resources/paul-nations-resources/vocabulary-tests)

語彙水準テスト

これは、語彙（単語）のテストです。右の日本語に合う英単語を選ぶ形式です。答えは番号で
の上に記入しなさい。初めに解答例です。

1 business
2 clock   __   壁
3 horse   __   馬
4 pencil   __   鉛筆
5 shoe
6 wall

答え方は以下のようになります。

1 business
2 clock   _6_   壁
3 horse   _3_   馬
4 pencil   _4_   鉛筆
5 shoe
6 wall

テストの中のいくつかの単語は、この水準よりも難しい単語です。これらの単語の意味を捜す必要はありません。
上の例題で言えば、business, clock, shoe がそれに当たります。

それではこれから実際にテストです。

1000 word level test   Japanese

1 could			1 kill	
2 during	__	～することができた	2 reply	__ 前進する
3 this	__	～の間	3 advance	__ 返事をする
4 piece	__	～するために	4 appoint	__ 殺す
5 of			5 divide	
6 in order to			6 receive	
1 indeed			1 moment	
2 what	__	私の	2 separate	__ 離れた
3 along	__	確かに	3 worse	__ 瞬間
4 my	__	いくらかの	4 free	__ 黄色の
5 some			5 heavy	
6 away			6 yellow	
1 church			1 spring	
2 scene	__	車	2 danger	__ 姉
3 hour	__	困難	3 stone	__ 危険
4 trouble	__	事実	4 product	__ 石
5 fact			5 sister	
6 car			6 subject	

1 meet
2 leave   __   置く
3 put   __   与える
4 give   __   使う
5 use
6 begin

1 wind
2 room   __   男
3 line   __   線
4 enemy   __   夜
5 night
6 man

2,000 word level

1 coffee
2 disease   __   賃金
3 justice   __   スカート
4 skirt   __   公正
5 stage
6 wage

1 choice
2 crop   __   温度
3 flesh   __   肉
4 salary   __   給料
5 secret
6 temperature

1 cap
2 educatio   __   教育
3 journey   __   目盛り
4 parent   __   旅行
5 scale
6 trick

1 attack
2 charm   __   財宝
3 lack   __   魅力
4 pen   __   欠如
5 shadow
6 treasure

1 cream
2 factory   __   クリーム
3 nail   __   富
4 pupil   __   生徒
5 sacrifice
6 wealth

1 example
2 breadth   __   幅
3 fear   __   恐怖
4 desert   __   会館
5 bit
6 hall

1 surround
2 shoot   __   はまる、ふさわしい
3 paint   __   警告する
4 fit   __   撃つ
5 command
6 warn

1 adopt
2 climb   __   登る
3 examine   __   調査する
4 pour   __   囲む
5 satisfy
6 surround

1 bake
2 connect   __   つなぐ
3 inquire   __   歩き回る
4 limit   __   制限する
5 recognize
6 wander

1 burst
2 concern   __   破裂する
3 deliver   __   上達する
4 fold   __   届ける
5 improve
6 urge

1 original
2 private   __   最初の
3 royal   __   私有の
4 slow   __   全体の
5 sorry
6 total

1 ancient
2 curious   __   難しい
3 difficult   __   古代の
4 entire   __   神聖な
5 holy
6 social

2,000 word level

1 copy		
2 event	__	先端、頂点
3 motor	__	原動機、発動機
4 pity	__	写し、模写
5 profit		
6 tip		

1 admire		
2 complain	__	伸ばす
3 fix	__	紹介する、導入する
4 hire	__	賞賛する
5 introduce		
6 stretch		

1 accident		
2 debt	__	轟音、吠え声
3 fortune	__	負債、借金
4 pride	__	誇り、自尊心
5 roar		
6 thread		

1 arrange		
2 develop	__	発展する
3 lean	__	整頓する
4 owe	__	好む
5 prefer		
6 seize		

1 birth		
2 dust	__	運動競技
3 operation	__	勝利
4 row	__	誕生
5 sport		
6 victory		

1 blame		
2 elect	__	製造する
3 jump	__	選挙で選ぶ
4 manufacture	__	溶ける
5 melt		
6 threaten		

1 clerk		
2 frame	__	飲み物
3 noise	__	事務員
4 respect	__	雑音、騒音
5 theatre		
6 wine		

1 brave		
2 electric	__	普通の
3 firm	__	空腹の
4 hungry	__	勇敢な
5 local		
6 usual		

1 dozen		
2 empire	__	機会
3 gift	__	１２
4 opportunity	__	税金
5 relief		
6 tax		

1 bitter		
2 independent	__	美しい
3 lovely	__	僅かな
4 merry	__	人気のある
5 popular		
6 slight		

Appendix D

Research Proposal Overview

	Week 1	Week 2	Week 3	Week 4	Week 5
	60 minutes	60 minutes	60 minutes	60 minutes	60 minutes
CON	- VLT - Pretest	- Immediate Posttest for Song A	- Immediate Post-test for Song B	- Delayed posttest for Song A	- Delayed posttest for Song B
EX1		- Listen to Song A (1X) - Immediate Posttest for Song A	- Listen to Song B (1X) - Immediate Post-Test for Song B		
EX3		- Listen to Song A (3X) - Immediate Posttest for Song A	- Listen to Song B (3X) - Immediate Post-Test for Song B		
EX5		- Listen to Song A (5X) - Immediate Posttest for Song A	- Listen to Song B (5X) - Immediate Post-Test for Song B		