

Incidental Vocabulary Acquisition Through Listening¹

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Abstract

Incidental acquisition of vocabulary has been extensively studied by many researchers through various media, such as employing reading comprehension. However, there is a dearth of studies that focus on the contribution of listening to the incidental acquisition of vocabulary. The current study aims to fill this gap. This study explored the effect of watching on-screen content on the incidental acquisition of vocabulary through listening. Participants were 49 Indian learners of English as a second language. Based on the survey on their frequency of watching videos, movies, or songs in English, we categorized them into viewer types. The different viewer types are associated with varying frequencies of listening to English. The participants were asked to take a vocabulary test. A one-way ANOVA was performed to test if the vocabulary scores differed among the groups. The between-group analysis of variance yielded a statistically significant value $F(1, 47) = 79.56, p = .000$, indicating strong evidence against the null hypothesis. The findings suggest that listening significantly contributes to the learners' incidental vocabulary acquisition and that their test scores vary based on the time they devote to listening.

Resumen

Se ha estudiado ampliamente la adquisición incidental de vocabulario a través de diversos medios, como el empleo de la comprensión lectora. Sin embargo, pocos estudios se centran en la contribución de la escucha a la adquisición incidental de vocabulario. El estudio actual tiene como objetivo llenar este vacío. Este estudio exploró el efecto de ver contenido en pantalla sobre la adquisición incidental de vocabulario a través de la escucha. Los participantes fueron 49 estudiantes indios de inglés como segundo idioma. Según la encuesta sobre la frecuencia con la que miran videos, películas o canciones en inglés, los clasificamos en tipos de espectadores. Los diferentes tipos de espectadores están asociados con diferentes frecuencias de escuchar inglés. Se pidió a los participantes que hicieran una prueba de vocabulario. Se realizó un ANOVA de una vía para comprobar si las puntuaciones de vocabulario diferían entre los grupos. El análisis de varianza entre grupos arrojó un valor estadísticamente significativo $F(1, 47) = 79,56, p = 0,000$, lo que indica una fuerte evidencia en contra de la hipótesis nula. Los hallazgos sugieren que escuchar contribuye significativamente a la adquisición incidental de vocabulario de los alumnos y que sus puntajes en las pruebas varían según el tiempo que dedican a escuchar.

Introduction

Listening has shown to have a contributing effect on vocabulary development just as reading comprehension (Dang et al., 2021; Fakhr et al., 2021; Pavia et al., 2019). According to Vidal (2011), before schooling and formal education, most of the vocabulary learning happens through listening. In the case of L1, learners have a rich listening input environment, and they learn the different aspects of language with ease. On the other hand, second language (L2) learners do not have the advantage of a rich language setting, and they depend largely on authentic learning materials. These potential sources of learning have a significant impact on the incidental acquisition of vocabulary. For instance, Pavia et al. (2019) investigated incidental vocabulary acquisition through listening to songs. Similarly, Peters and Webb (2018) demonstrated how watching television contributed to the incidental acquisition of vocabulary at the meaning recalling and recognition levels. Therefore, as few studies have ever investigated the effects of listening on the incidental acquisition of vocabulary, the potential of listening in this area is explored in this study.

Incidental vocabulary learning

The incidental vocabulary learning hypothesis states that words are best learned incidentally by focusing on the meaning of the words in context (Nagy & Herman, 1987). However, the common practice and focus in a second language environment are otherwise that is, intentional learning is given much importance. Although intentional learning gains are higher immediately after the learning or treatment period, they do not persist over time (Ender, 2016; Nagy & Herman, 1987). Regardless of its refinement, deliberate and explicit vocabulary instruction can never yield substantial vocabulary gains (Nagy & Herman, 1987). While intentional vocabulary learning warrants conscious effort and undivided attention, its counterpart, incidental vocabulary learning, happens seemingly naturally with ease. Learners enrich their vocabulary

¹ This is a refereed article. Received: 10 November, 2021. Accepted: 18 February, 2022. Published: 28 January, 2023.

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and develop deeper understanding by encountering words in different contexts (Webb & Nation, 2017). Word learning is not the actual focus and primary activity in incidental vocabulary learning. It ensues from other activities with which a learner is engaged. For instance, van Zeeland and Schmitt (2013) studied incidental vocabulary acquisition through listening to various on-screen input, informal lectures, games, etc., and found that their participants learned vocabulary items significantly. Peters and Webb (2018) studied the incidental learning of vocabulary through watching TV shows. Jin and Webb (2020) investigated how listening to the teacher talk contributed to the incidental acquisition of words. A large body of evidence reiterates the robustness of incidental vocabulary acquisition (van Zeeland & Schmitt, 2013; Peters & Webb, 2018; Jin & Webb, 2020; Rahul & Ponniah, 2020).

Incidental vocabulary learning through listening

Many studies have shown that vocabulary is acquired incidentally through reading (Rahul & Ponniah, 2020; Waring & Takaki, 2003; Webb & Chang, 2015). For instance, Ponniah (2011) investigated this topic and their results indicate that the learners who intentionally and consciously learned new words could not use them in their writing. Moreover, their counterparts who focused on the meaning of the reading passages could use the target words appropriately in their writing. Correspondingly, Waring and Takaki (2003) demonstrated how the learners recognized the form and meaning of target words after reading a graded reader. Webb and Chang (2015) found that the average vocabulary gain for their participants was 45.31% after an extensive reading program.

Nevertheless, incidental acquisition of vocabulary through listening has received much less attention than is the case for reading in the field of second language acquisition (SLA) research. Brown et al. (2008) argued that although listening and reading contributed to vocabulary learning gains, reading yielded more satisfactory results when compared to listening. Vidal (2011) demonstrated differences in the acquisition and retention of vocabulary through listening compared to reading. Studies acclaiming the salience of reading over listening argue that vocabulary gains are typically much lower in listening than reading and are subject to prior vocabulary knowledge and listening proficiency (Brown et al., 2008; Vidal, 2011; Vu & Peters 2020). These claims are counterintuitive when considering vocabulary acquisition through listening in an incidental manner. It is crucial to understand that incidental vocabulary learning is gradual and substantial learning happens when encountering words in different contexts (Teng, 2019; Webb, 2008; Frances et al., 2020). For instance, Teng (2019) found that the frequency of exposure significantly affected the learning of words incidentally. The frequency of exposure to words increases alongside the frequency of the listening activity. Furthermore, the frequency of an activity is determined by the comprehension and pleasure derived from that activity (Diener et al., 2009; Velasco Matus et al., 2016). Therefore, if incidental learning happens through listening, it is understood that whatever input a learner listens to is comprehensible, pleasurable, and frequent. Learners overcome difficulties like segmenting and identifying the words in connected speech by using the adapted comprehensible listening materials. When the input is comprehensible and interesting to learners, both the frequency of listening and the possibility of learning will be increased. Like the requisites of input through reading, learners could learn vocabulary incidentally when the listening input is comprehensible, pleasurable, and frequent (Krashen, 2017). Therefore, it is essential to provide equal attention to inquiries into the incidental acquisition of vocabulary through listening like reading.

English as a foreign language L2 learners do not have the advantage of a rich listening input environment like the L1 learners. This impoverished listening input setting leads L2 learners to adapt authentic listening materials available for studying, especially learning vocabulary. Most of the vocabulary learning happens incidentally by listening to songs, movies, web series, sports commentaries, etc. (Kuppens, 2010; Lindgren & Muñoz, 2013). Very few studies employing various input sources demonstrate the extent to which listening contributes to the incidental acquisition of vocabulary. Long and Richards (1994) were the early researchers investigating incidental vocabulary acquisition through academic listening. Likewise, Vidal (2003) explored the contribution of academic listening to incidental vocabulary learning and found that the learning gains were significant. Their results indicated that the learners recognized the correct meaning and usage of target words. They were able to retain 8.2% of the vocabulary gains during a delayed post-test after four weeks. Van Zeeland and Schmitt (2013) studied the incidental learning of vocabulary through listening to television shows, interviews, and lectures. They found that the learners' vocabulary gains were substantial. They also found that their vocabulary acquisition, although decreased slightly, persisted over time. While there is increasing evidence for vocabulary acquisition through extensive reading and intentional listening based on form-focused instructions and specifically designed

pedagogies, there is a dearth of evidence for incidental acquisition of vocabulary through listening. Therefore, the current study reports the incidental acquisition of vocabulary through listening to various input sources such as songs, movies, sports commentaries, etc. We hypothesized that the listeners with varied listening frequencies differ in their vocabulary test scores. The research questions sought in this study are:

1. Does listening to various on-screen contents contribute to incidental vocabulary learning in L2?
2. To what extent does the frequency of listening contribute to incidental vocabulary learning?

In intentional vocabulary learning, whatsoever the gains are, they deteriorate over time and do not result in significant vocabulary development. Besides, the immediate post-tests after the treatment period only help in identifying knowledge that is freshly acquired. They do not throw light on the retention of vocabulary in a natural setting. Hence, the present study did not employ any intervention and only focused on the learners' general vocabulary knowledge. However, the participants differed in their frequency of listening to various sources of input.

Method

Participants

Forty-nine Indian learners who speak English as their second language volunteered to participate in the study. The participants' ages ranged from 20 to 45 years ($M=26.22$, $SD = 5.4$) with 55.1% identified as male and 44.9% identified as female. Before obtaining data for the analysis, all the participants were given information about the nature of the study. They were ensured that the information they provided would be kept confidential and comply with research ethics. After reiterating the nature and terms of the research and data collection, the participants consented to participate in the study. All the participants attended schools and colleges where their medium of instruction was English. The preliminary survey revealed that 32, 38, and 6 percent of the participants used English at 50, 80, and 90 percent of the time, respectively, in their daily conversations. None of them was exposed to native English-speakers and did not live in any English-speaking countries. However, they were exposed to native and other varieties of English on-screen.

Instruments

Participants were administered a questionnaire containing a vocabulary test, a survey on their English usage, and the frequency of listening to English through various sources like movies, songs, sports commentaries, etc., of their own choice. The vocabulary test was taken from the free Oxford intermediate vocabulary proficiency test and locally modified according to the needs of the study. It had 40 items with questions on collocation, meaning, phrasal verbs, etc. The questions were of different types such as cloze questions, multiple-choice questions, matching the correct words, etc. The responses were recorded dichotomously for the ease of statistical analyses. Zero was assigned to a wrong answer, and one was assigned to a correct answer. The participants self-reported their English usage, and it was measured on a five-point scale, with the least corresponding to the range 'less than 30% of the time' and the highest to '100% of the time; I use only English' for the question 'How often do you use English in everyday conversation?'. Similarly, the participants self-reported their frequency of listening in English, and it was measured using a four-point scale with the least corresponding to 'No', two to 'sometimes' and the maximum to 'Yes' for the question 'Do you prefer to watch/listen movies and serials/songs in English?'

Procedure

Firstly, participants were categorized into viewer types based on the survey on their frequency of watching videos, movies, or songs in English. They are classified as *non-viewers*, *infrequent viewers*, and *frequent viewers*. According to these categories, the frequency of the participants' exposure to English via listening is believed to vary. The non- and infrequent viewers are associated with a lower frequency of listening to English, and frequent viewers are associated with a higher frequency of listening to English. Secondly, the internal reliability of the vocabulary test was measured using Cronbach's alpha. Thirdly, a one-way analysis of variance was computed to distinguish the differences between the groups. Finally, the partial eta square value was calculated to find the effect size and the strength of association between listening frequency and vocabulary test scores. The analyses were carried out using the statistical package SPSS.

Results

Table 1 presents the internal reliability analysis of the vocabulary test items. The Cronbach's alpha was .713 covering all 40 test items. Although deleting a test item would yield a value of .733, we decided not to delete it and keep the 40 items for further testing. The deletion of the test item neither provided a significant difference between the values nor extended the value above .8, which is interpreted as excellent reliability. The alpha value of $>.7$ is interpreted as a good and acceptable value to proceed with further analyses. Moreover, the z value of Skewness and Kurtosis determined the normality of the test scores at .09 and $-.74$ as the sample size was <50 .

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.713	.707	40

Table 1: Internal reliability of vocabulary test

Table 2 presents the descriptive statistics of the participants' vocabulary test scores belonging to the different groups. The group of non-viewers is not represented in the table because no participants fit that category. It is evident from the vocabulary test scores that listening contributed to the development of vocabulary knowledge and is reflected across all the groups.

	N	Mean	Std. Deviation	95% Confidence Interval for Mean		Minimum	Maximum
				Lower Bound	Upper Bound		
Infrequent viewers (Infrequent listening)	24	20.46	2.889	19.24	21.68	14	25
Frequent viewers (Frequent listening)	25	28.12	3.113	26.83	29.41	22	35
Total	49	24.37	4.881	22.97	25.77	14	35

Table 2: Descriptive statistics of vocabulary test scores

The homogeneity of variances was measured and satisfied using the Levene statistic, $F(1, 47) = .069$, $p = .793$. Further, a one-way ANOVA was performed to test if the vocabulary scores differed among the groups. The between-groups analysis of variance yielded a statistically significant value $F(1, 47) = 79.56$, $p = .000$, indicating strong evidence against the null hypothesis (Table 3). Further, Figure 1 shows the difference in the means of the vocabulary scores between the groups.

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	718.789	1	718.789	79.565	.000
Within Groups	424.598	47	9.034		
Total	1143.388	48			

Table 3: One-way ANOVA of the groups

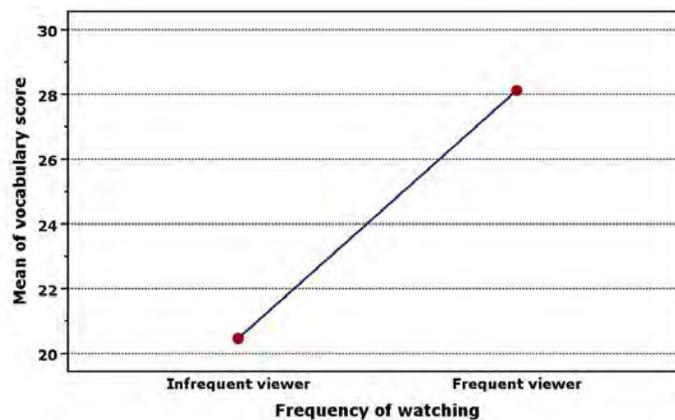


Figure 1: Vocabulary scores mean plot of the groups

After determining the significant differences between the groups, the effect size for vocabulary test scores was measured using the test of partial eta squared and reported in Table 4. The η_p^2 value of .629 suggests a large effect of the watching/listening frequency for the participants' test scores. It is interpreted that 62.9 % of the variability in the vocabulary test score is accounted for by the watching/listening frequency.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	718.789 ^a	1	718.789	79.565	.000	.629
Intercept	28896.177	1	28896.177	3198.600	.000	.986
WatchFreq	718.789	1	718.789	79.565	.000	.629
Error	424.598	47	9.034			
Total	30238.000	49				
Corrected Total	1143.388	48				

a. R Squared = .629 (Adjusted R Squared = .621)

Table 4: Estimation of the effect size for vocabulary test scores

Discussion and Conclusions

The study demonstrated the extent to which listening contributes to the incidental acquisition of vocabulary. The results show that the learners' vocabulary test scores vary based on the time they devote to listening. The higher the frequency of listening or watching videos in the target language, the greater their vocabulary scores are. Therefore, the listening frequency has a significant effect on the vocabulary test scores of the participants.

The difference in the scores between the groups suggests that extensive listening plays a significant role in boosting learners' vocabulary knowledge. The results are consistent with the existing literature that asserts the impact of listening on learners' vocabulary knowledge, indicating that listening promotes learning of vocabulary incidentally (Jin & Webb, 2020; Pavia et al., 2019; van Zeeland & Schmitt, 2013). The body of research investigating the existing vocabulary knowledge and the amount of listening without a treatment period reiterates the improvement of incidental acquisition of vocabulary through listening.

Similar to the results of Webb and Chang (2015), the findings indicate that the quantity of listening input contributes significantly to vocabulary gains. The findings are also consistent with comprehension and pleasure hypotheses. They suggest that the participants with a higher frequency of watching, i.e., listening, received comprehensible input. When the input is comprehensible and pleasurable, the frequency of the activity increases, leading to learning gains.

Further studies are required to solidify the findings. Although the survey reveals the listening capacity of the learners in a natural setting, a controlled listening setup with target words may show more accurate incidental learning. It would also help in overcoming the influence of reading. A controlled listening environment to study the incidental learning of vocabulary, particularly a single set of target words like collocations, single words, phrases, etc., would reveal more on the type of vocabulary one learns through listening. Future studies could also focus on how incidental learning through listening contributes to receptive and productive vocabulary skills.

In conclusion, this study showed that listening to various on-screen content can contribute significantly to the incidental acquisition of vocabulary. The findings suggest that choosing to watch or listen to comprehensible input can lead to a good measure of listening, which will, in turn, provide better learning gains of L2 vocabulary. The significant difference between the groups also suggests that learners could adapt comprehensible and pleasurable listening materials to improve their L2 vocabulary learning. In addition, the substantial effect of listening on vocabulary test scores indicates the significant contribution of listening to vocabulary gains. Future studies can explore how listening to different forms of on-screen content contributes to particular vocabulary types. Like reading, incidental acquisition of vocabulary through listening deserves necessary attention within the realm of research in SLA.

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