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# INCIDENTAL VOCABULARY ACQUISITION IN SLA: DOES AURAL INPUT FACILITATE VOCABULARY ACQUISITION WHILE READING? 

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#### Abstract

Vocabulary acquisition is essential to achieve fluency in the target language; however, it is a daunting and unending task for second language learners due to many words required to be learned. This two-group, pre/post/delayed post-test quasiexperimental study aims to investigate whether English as a Foreign Language (EFL) learners could learn new English words incidentally from reading texts in their course books and whether there was an effect of simultaneous input modality in a successful acquisition. It further aimed to examine the rate of vocabulary recall by the control group (reading-only condition) and experimental group (listening-while-reading condition). The study revealed four significant findings. Without being exposed to any intentional instruction on target vocabulary, 5.53 words were learned in reading-only mode, which was a gain of more than $49 \%$. When written input was enhanced with oral input, it resulted in relatively higher success in lexical development. The experimental group, which listened to the audio recordings of the texts while simultaneously reading them, learned 6.37 new words on average, a gain of higher than $60 \%$. A comparison of the two groups revealed that the effect of aural enhancement on incidental vocabulary learning was relatively small, a difference of 0.84 words between the two groups. Words learned in the reading-only condition were more resistant to decay than words learned in the listening-while-reading condition. Important implications for EFL teachers are suggested based on the findings.


Keywords: Aural enhancement; incidental vocabulary acquisition; input modality; SLA; vocabulary acquisition

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# íkinci dil edíniminde raslantisal sözcük edinimí: ìsitsel girdi OKUMA SIRASINDA SÖZCÜK EDİNIMİNí KOLAYLAŞTIRIR MI? 

## ÖZET

Hedef dilde akıcılık için sözcük edinimi esastır; ancak bu ikinci dil öğrenenler için öğrenilmesi gereken çok sayıda sözcük nedeniyle göz korkutucu ve bitmeyen bir süreçtir. Bu iki gruplu, ön/son/gecikmeli son test yarı deneysel çalışma, Yabancı Dil Olarak İngilizce (EFL) öğrenenlerin ders kitaplarındaki metinleri okurken yeni İngilizce sözcükleri raslantısal olarak öğrenip öğrenemeyeceklerini ve eşzamanlı girdi yönteminin başarılı öğrenmede bir etkisi olup olmadığını araştırmayı amaçladı. Ayrıca kontrol grubu (sadece okuma koşulu) ve deney grubu (okurken dinleme koşulu) tarafından sözcüklerin hatırlanma oranları da incelendi. Çalışma dört ana bulguyu ortaya koydu. Hedef sözcükler ile ilgili herhangi bir kasıtlı öğretime maruz kalmadan, salt okuma modunda katılımcılar tarafından 5,53 kelime öğrenildi ve bu \%49'dan fazla bir kazanımın söz konusu olduğunu gösterdi. Yazılı girdi sözlü girdiyle zenginleştirildiğinde, katılımcıların sözcük gelişiminde nispeten daha yüksek başarı görüldü. Metinleri okurken aynı zamanda ses kayıtlarını da dinleyen deney grubu \%60'ın üzerinde bir kazanımla ortalama 6,37 yeni sözcük öğrendi. İki grubun karşılaştırılması, işitsel pekiştirmenin rastlantısal sözcük öğrenimi üzerindeki etkisinin nispeten küçük olduğunu, iki grup arasında 0.84 kelimelik bir fark olduğunu ortaya çıkardı. Sadece okuma durumunda öğrenilen sözcükler, okuma sırasında dinleme durumunda öğrenilen sözcüklere göre unutulmaya karşı daha dirençliydi. Bulgulara dayalı olarak İngilizce öğretmenleri için önemli çıkarımlar önerilmektedir.

Anahtar Kelimeler: İşitsel pekiştirme; rastlantısal sözcük edinimi; girdi yöntemi; ikinci dil edinimi; sözcük edinimi

## 1. INTRODUCTION

Lexical knowledge is fundamental to second language acquisition (SLA). It is estimated that second/foreign language (L2) learners need more than 9,000 word families and more than 11,000 individual words for competence in academic reading in English (Nation, 2006; Nation \& Chung, 2009). This situation presents a considerable challenge for individuals who learn English as a foreign language (EFL). Both the significance of lexical knowledge in L2 acquisition and the challenge due to the vast amount of necessary lexical items poses have motivated scholars to search for effective ways to foster L2 learners' lexical development to a point at which they can comprehend the English texts they read.

In the past several decades, studies on intentional and incidental vocabulary learning have increased considerably. These studies have shown that the intentional study of lexical items results in better acquisition in adult learners (Laufer \& Nation, 2012; Nation \& Chung, 2009; Sonbul \& Schmitt, 2010). Although it is widely considered a good way to teach vocabulary, explicit teaching of lexical items falls short of explaining the gap between words acquired by learners and explicitly taught by teachers in the classroom environment (Malone, 2018). Besides, EFL learners have limited exposure to the target language outside, and time is an important constraint for L 2 teachers who have a limited time to cover many things. Although it is ideal, it is not a realistic objective for EFL instructors to explicitly teach all the vocabulary L2 learners need to read authentic written texts. According to Schmitt and Schmitt (2012), students have access to only 3,000 most frequent word families in L2 classrooms. This
number is insufficient for them to succeed in academic reading, which brings incidental vocabulary acquisition to the foreground.

Many existing studies on incidental vocabulary learning have examined the effects of frequency of exposure and input mode (written, aural, video, pictures, and so forth). Besides, these studies were mainly conducted with advanced or nearly advanced learners of L2 and primarily focused on the reading skill (Brown et al., 2008; Horst, 2005; Pellicer-Sánchez \& Schmitt, 2010; Rott, 1999; Waring \& Takaki, 2003). However, the research on incidental vocabulary acquisition of learners with low L2 proficiency and the role of simultaneous input modalities are limited in number. In addition, to the researcher's knowledge, there is scarcely any such study in Turkey's context with learners who are native speakers of Turkish. In this regard, this quasi-experimental study seeks to examine whether reading-only and listening-while-reading modes affect vocabulary learning of EFL students studying the A2 level at an intensive English programme at a state university in Turkey. A postpositivist worldview best suits the study because the research questions addressed require identifying the role of different input modalities (reading vs. listening-while-reading) on incidental acquisition of lexical items during L2 instruction (Creswell, 2014).

## 2. LITERATURE REVIEW

### 2.1. Incidental Vocabulary Learning

Continuity of vocabulary learning is essential for competence in receptive and productive language skills in an L2. A few studies of direct instruction of vocabulary, where learners were expected consciously and willingly study or memorize a list of vocabulary, produce remarkable results (Nation, 2001, p. 298). However, research shows that L2 learners can unintentionally acquire a certain amount of vocabulary by mere exposure while engaged in a language task, such as reading or listening for comprehension.

Incidental vocabulary learning refers to learning new lexical items through another activity without any intention or requirement. One of the earlier proponents of incidental education in the field of SLA is Krashen, who argues that people learn languages and develop literacy subconsciously through comprehensible input. Language acquisition happens when we are not aware that it is happening (Krashen, 2008). Although direct instruction of vocabulary seems to achieve impressive results (Nation, 2001), according to Krashen, deliberate vocabulary instruction is ineffective in providing deep knowledge of words, including their semantic and syntactic properties. It instead provides synonyms or short definitions of new words.

Although some scholars use the terms incidental and implicit interchangeably, some distinguish between the two terms (Bisson et al., 2014; Malone, 2018). Unlike implicit learning, which centres upon the role of consciousness, incidental learning concentrates on the learner's intention. Therefore,
incidental vocabulary learning research majorly studies how much acquisition occurs when learners do not deliberately focus on vocabulary but on something else. Some scholars argue against using the term incidental, addressing the difficulty of uncovering whether students deliberately focus on learning words when engaged in a task in classroom studies (Bruton et al., 2011; Malone, 2018). Given that most incidental vocabulary learning studies examined incidental vocabulary acquisition through reading in classroom environments. They had no control over the duration of exposure, and their findings on implicit word learning are considered to be questionable (Malone, 2018). To overcome the problem of duration of exposure and attention, some studies tried to keep participants' attention on the task rather than the lexical items and restricted the time of exposures that resulted from rereading (see Tekmen \& Daloğlu, 2006; Webb, 2007; Webb \& Chang, 2015).

Prior research reveals a variety of variables significant to incidental vocabulary learning, such as the type of word and similarity of L2 words to L1 words (Vidal, 2011). However, a large number of existing studies on incidental vocabulary learning have examined the effects of frequency of exposure (Horst et al. 1998; Pellicer-Sánchez \& Schmitt, 2010; Rott, 1999; Waring \& Takaki, 2003; Webb, 2007) and revealed it as a strong predictor of successful learning. Nevertheless, these studies reported different findings about the number of times the target L 2 words should occur for acquisition. Some studies provided evidence for some learning at a single exposure (Webb, 2007; Chen \& Truscott, 2010), while others proposed two (Rott, 1999), three or four (Pellicer-Sánchez, 2016), eight (Bisson et al., 2013; Horst et al., 1998), and even more than twenty (Waring \& Takaki, 2003). Nation (2014) and Laufer (2017) suggested twelve as the ideal number of exposure to learn the target word. The literature reveals a linear, incremental increase in the acquisition and retention of both unknown words and new meanings for known words with more encounters (Webb \& Cheng, 2015; Hulme et al., 2018). According to Malone (2018), several methodological and theoretical differences among these studies account for the variation in the success of learning. The words tested, the number of items to be learned, the type of passages used, the stimuli provided to the participants, participants' proficiency levels, the aspect of vocabulary knowledge, and the baseline for measurement and the types of measure varied among the studies. Thus, they came up with different findings.

## a. Incidental Vocabulary Learning from Simultaneous Input Modalities: Written and Aural Input

Regarding incidental vocabulary learning through reading, the primary purpose is to comprehend a text, and a couple of words can be learned along the way (Bisson et al., 2014). A considerable body of literature exists on incidental acquisition of nonwords or L2 words through reading (see Batterink \& Neville, 2011; Pellicer-Sánchez, 2016; Williams \& Morris, 2004). Most of these studies investigated vocabulary gains from extensive reading and revealed that learners could acquire vocabulary from reading. However, they reported diverging findings such as a gain of $22 \%$ (Horst et al., 1998), $42 \%$ (Waring \& Takaki, 2003), and $51 \%$ (Horst, 2005). A meta-analysis by Waring and Nation
(2004) indicated that the number of words learned incidentally is somewhat low, as one tenth of the target words tested. The studies in their analysis also differed considerably in their results, such as vocabulary gain rates as high as $25 \%$ and as low as $4 \%$. Waring and Nation (2004) explain the divergences again based on the methodological differences among these studies.

Several scholars have investigated the influence of input modalities on the acquisition of novel words in L1 and L2. However, much of the research either focused on intentional vocabulary learning or was conducted with L1 speakers. Only a few studies investigated the role of input modalities on word learning in L2 to unveil the potential impact of each mode. In one of these studies, Kelly (1992) investigated whether there were differences in word retention in listening-while-reading mode as opposed to reading-only mode. He found that visual input resulted in higher scores on immediate tests. However, combining visual and aural input resulted in higher scores when tests were delayed.

Horst et al. (1998) and Brown et al. (2008) examined the issue from the opposite angle and studied the influence of reading while listening. Horst et al. (1998) demonstrated that teachers reading aloud and students following the text facilitated incidental vocabulary learning. Brown et al. (2008) also expected that audio input could reduce mental resources required for phonological processing in unfamiliar vocabulary and give room for semantic processing. On the other hand, they could not find any significant differences in incidental vocabulary learning between reading-only and reading-whilelistening conditions.

In another study, Webb et al. (2013) examined incidental acquisition of collocations in reading-while-listening conditions. They modified the texts in a way that learners would encounter the target items either 1,5 , or 10 times or they would be asked to learn them explicitly. Their participants achieved considerably better acquisition in the explicit learning phase. Finally, in a recent study, Malone (2018) investigated the role of aural enhancement of input on incidental L2 vocabulary learning while reading and noted that simultaneous input modalities fostered deeper processing and successful acquisition.

## b. The Present Study

The present study aims to investigate the impact of simultaneous bimodal input on adult EFL learners' incidental acquisition and long-term retention of new vocabulary. A control group (readingonly condition) and an experimental group (listening-while-reading condition) were compared to examine whether aural enhancement facilitated higher incidental vocabulary learning during reading activities. The two independent variables were the type of input (written vs. written + aural) and the time of the test (immediate vs. one week later). The dependent variable was accuracy in word-meaning matching tests. For this purpose, the following research questions are addressed:

1. To what extent does initial vocabulary learning occur in reading-only conditions?
2. To what extent does initial vocabulary learning occur in listening-while-reading condition?
3. Is there an effect of audio enhancement on incidental vocabulary learning while reading?
4. To what extent, were the newly learned words retained by the control and experimental groups one week after interventions?

## 3. METHODOLOGY

### 3.1. Participants

Ninety EFL learners with elementary competence (A2) in English were recruited from four classes in an Intensive English program at a state university in Turkey in the 2020-2021 academic year. All participants were native speakers of Turkish, and they were learning English as a foreign language. Thirty-three students completed all sessions of the study. Fifty-seven participants were omitted as they did not complete at least one of the seven tests (one pre-test, an immediate post-test consisting of five mini-tests, a delayed post-test). The control group involved 17 participants ( 7 female, 10 male) with an age range of 17 to 23 . The experimental group involved 16 participants ( 6 female, 10 male) with an age range of 18 to 32 . Students were not informed about the upcoming pre-test, nor were they informed about the vocabulary learning aspect of the study. Instead, they were told that the study was about reading comprehension, and they would read some texts and take some reading comprehension tests. Upon the completion of the study, participants were informed about the actual purpose of the study.

### 3.2. Materials

Five graded (A2) level reading texts were selected from different EFL course books for the study. Because the major aim of the study was to determine the average number of words the L2 students could learn and recall in online reading classes without being exposed to any direct vocabulary teaching, naturalistic materials were favoured over experimental/modified ones. Participants encountered target vocabulary through reading five texts with a set of 25 target words. Each text contained five target words, each presented two or three times throughout the text. The reading texts were similar in length (Text 1: 203 words, Text 2: 201words, Test 3: 224 words, Text 4: 251 words, Text 5: 240 words). To have a control over the exposure time and prevent students focusing on target words, reading texts were presented on timed PowerPoint slides. Students read only two or three sentences depending on the length of the sentences on the screen. A blank slide was added after each slide so that the students and the researcher could discuss the reading text. Differently from the control group, the experimental group was also exposed to aural input while reading.

### 3.3. Measures

The same 25 -question items were used to measure participants' lexical knowledge before, immediately after and a week after the treatments. The tests were uploaded on a file sharing platform and accessed through the URL sent to all participants. Because the form-meaning connections were selected as the baseline, participants' knowledge of the target words was measured through meaning-toword matching questions. The test questions were in multiple-choice format, and students answered 25
questions in total. Students were asked to choose the correct meaning for the target word among five options in each question.

### 3.4. Procedure

Before treatments, participants' prior knowledge of the target words was assessed via an online pre-test. They were ensured that their answers would not be used outside of the study. They were warned not to use a dictionary or translate programs and to answer the questions based only on their knowledge. The researcher started the treatment sessions with both groups one week after the pre-test. She informed the participants about the procedure and rules.

During the interventions, participants in the control group were asked to read the text. Participants in the experimental group were asked to read the text while simultaneously listening to the audio recording of it. Each text was divided into many sections, and two or three sentences were shown on the screen at a time. Before moving to the next slide, the researcher asked the participants some questions to make sure that the participants comprehended the text. They could not go back to the previous slides and reread the texts. Neither dictionary use nor note-taking was permitted. No questions about the vocabulary used in the texts were allowed. After each reading activity, the participants completed an online test (the immediate post-test). The questions that were asked in the pretest were embedded in reading comprehension questions, so each immediate test included two sections: a section involving the five vocabulary questions and a filler section that involved comprehension questions about the text they studied. Comprehension questions were prepared in a way that all students could solve them very easily and spend only a little bit of time on these questions. Participants' answers to the comprehension questions were not included in the analysis. The main reason for the participants answering both vocabulary and comprehension questions was to ensure that they did not realise the study's actual purpose and pay deliberate attention to words during the following treatment sessions. The same procedure was followed in all five treatment sessions, which were completed in a week. The scores that participants got from vocabulary sections in five comprehension tests constituted their immediate test scores. Participants took the delayed post-test online one week later. The test items in each administration were the same.

### 3.5. Scoring

Students' responses to multiple-choice items in the word-meaning matching tests were coded for accuracy as either 1 (for correct answers) or 0 (for incorrect answers). The SPSS, version 25.0. was utilized to conduct descriptive analysis and calculate the means and percentages for lexical gains of participants. The researcher scored the tests.

## 4. RESULTS AND DISCUSSION

### 4.1. Research Question 1: To what extent does initial vocabulary learning occur in readingonly conditions?

Research question 1 aimed to investigate incidental vocabulary gain of the reading-only group. To answer the question, a descriptive analysis was employed. Table 1 summarises the data for pre-test and immediate post-test results for the control group. The mean pre-test and immediate post-test scores are $11.23(\mathrm{SD}=13.43)$ and $16.76(\mathrm{SD}=8.48)$, respectively. These findings show that without being exposed to any deliberate vocabulary instruction, 5.53 words were learned on average by A2 level EFL participants only through reading, which is a gain of more than $49 \%$.

These findings are compatible with prior research that provides evidence for the value of reading in incidental vocabulary learning. Reading alone seems to provide EFL learners with the input they need to acquire new vocabulary without any deliberate effort or intention (see Brown et al., 2008; Horst et al., 1998; Horst, 2005; Pigada \& Schmitt, 2006; Waring \& Takaki, 2003; Webb, 2007). The findings are parallel to the prior research showing that even a small number of exposures (two or three exposures in this study) to the target vocabulary through reading facilitated incidental vocabulary acquisition.

Table 1. Mean Scores for Lexical Gains by Reading-Only Group

| Mode | Pre-test |  | Immediate Post-test |  | $n$ | \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M | $S D$ | $M$ | $S D$ |  |  |
| Reading-only mode $(\mathrm{N}=17)$ | 11.23 | 13.43 | 16.76 | 8.48 | 5.53 | 49.24 |

Note. $\mathrm{n}=$ the number of words learned, $\%=$ percentage of gain

### 4.2. Research Question 2: To what extent does initial vocabulary learning occur in listening-while-reading condition?

Research question 2 aimed to examine incidental vocabulary learning in listening-while-reading mode. The mean scores of pre-test and immediate post-test results of experimental group participants were calculated through descriptive analysis. As Table 2 demonstrates, the mean scores were 10.25 $(\mathrm{SD}=2.12)$ for pre-test, and $16.62(\mathrm{SD}=2.82)$ for immediate post-test. These findings revealed that written input enhanced with oral input resulted in a gain of 6.37 words on average, a gain of higher than 60\%. These findings support the findings of Malone (2018) and Horst et al. (1998), demonstrating that aural enhancement of written input facilitated the success in incidental vocabulary learning in L2.

Table 2. Mean Scores for Lexical Gains by Listening-While-Reading Group

| Mode | Pre-test |  | Immediate Post-test |  | $n$ | \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M | D | M | D |  |  |
| Listening-while-reading ( $\mathrm{N}=16$ ) | 10.25 | 2.12 | 16.62 | 2.82 | 6.37 | 62.14 |

Note. $n=$ the number of words learned, $\%=$ percentage of gain

### 4.3. Research Question 3: Is there an effect of audio enhancement on incidental vocabulary learning while reading?

Research question 3 aimed to compare the control group and experimental group in terms of their incidental vocabulary acquisition in L2 and examine the effect of simultaneous input modalities on acquisition rate. As presented in Table 3, the control group ( $\mathrm{M}=11.23, \mathrm{SD}=13.43$ ) scored relatively higher than the experimental group $(\mathrm{M}=10.25, \mathrm{SD}=2.12)$ in the pre-test. On the other hand, the immediate post-test results of the two groups were very close to each other. The mean scores for the multiple-choice test were 16.76 ( $\mathrm{SD}=8.48$ ) for reading-only group and $16.62(\mathrm{SD}=2.82)$ for listening-while-reading group. These findings revealed that aural plus written input influenced incidental vocabulary learning through reading, and although not very powerful, it provided an advantage for the experimental group. While reading-only group learned 5.53 words on average (a gain of $49.24 \%$ ), listening-while-reading group learned 6.37 words on average (a gain of $62.14 \%$ ). See Figure 1 for the graphical presentation of data.

Table 3. Mean Scores for Lexical Gains by The Two Input Groups

| Mode | Pre-test |  | Immediate Post-test |  | 1 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M | $S D$ | M | $S D$ | $n$ | \% |
| Reading-only ( $\mathrm{N}=17$ ) | 11.23 | 13.43 | 16.76 | 8.48 | 5.53 | 49.24 |
| Listening-while-reading $(\mathrm{N}=16)$ | 10.25 | 2.12 | 16.62 | 2.82 | 6.37 | 62.14 |

$\overline{\text { Note. } .} n=$ the number of words learned, $\%=$ percentage of gain
These results align with the results of previous studies that found some effect of aural enhancement in form meaning connections (e.g., Malone, 2018). However, unlike them, the effect seen in the present study is relatively small, as small as a difference of 0.84 words, which might have resulted from some other factors that could not be controlled throughout the study other than the input mode, such as the differences in participants' working memory capacities and learning from exposure to the vocabulary outside of the study.


Figure 1. Lexical Gain Data for Two Input Modes

### 4.4. Research Question 4: To what extent were the newly learned words retained by the control and experimental groups one week after interventions?

The last research question examines the rate of vocabulary retention by the two groups (control group and experimental group) one week after completing the treatments. Immediate post-test and delayed post-test results for both groups are presented in Table 4, and the graphical distribution of the data is displayed in Figure 2. The control group (unenhancement group) outperformed the experimental group (aural enhancement group) in their delayed post-test scores. Results showed an impressive retention rate of the words in the control group over a week that they recalled nearly $98 \%$ of the words they acquired $(\mathrm{M}=16.76, \mathrm{SD}=8.48$ for immediate post-test, and $\mathrm{M}=16.41, \mathrm{SD}=7.77$ for delayed posttest). There was no significant forgetting after one week. Participants acquired new vocabulary incidentally through reading and recalled them over time.

The multiple-choice immediate post-test and delayed post-test measures revealed reasonably good memory of words in the experimental group standing at $80.44 \% ~(\mathrm{M}=16.62, \mathrm{SD}=2.82$ for immediate post-test, and $\mathrm{M}=13.37, \mathrm{SD}=1.41$ for delayed post-test). However, compared to the readingonly group, listening-while-reading group's data showed some decay from the initial learning, which was a loss of 3.25 words. These findings indicated that words learned incidentally through reading were more resistant to decay than words learned through listening while reading.

Table 4. Mean Scores for the Two Input Modes Over the Three Test Periods

| Mode | Immediate Post-test |  | Delayed Post-test |  | $\%$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | $M$ |  | .$S D$ | 7.91 |  |
| Reading-only (N=17) | 16.76 | .48 | 6.41 | 7.77 | 0.44 |
| Listening-while-reading <br> $(\mathrm{N}=16)$ | 16.62 | .82 | 3.37 | 1.41 |  |

Note. $\%=$ percentage of retain

The results of reading-only group for retention of new vocabulary over a week support Hulme et al. (2018), who found a good memory of the new meanings for known words by native Englishspeaking adults. However, the findings contradict the findings of Kelly's (1992) study where he found that combining visual and aural input resulted in higher scores in delayed post-test. The divergences in the findings suggest that increasing the frequency of encounters with the target word within the reading text may be more effective than enhancing reading with other input modalities for the acquisition and long-term retention of new vocabulary. Brown et al.'s (2008) findings that new words could be learned incidentally by reading or reading while listening; however, lexical items occur more frequently in the text were more resistant to decay, provide evidence for this proposition. Still, future investigations are necessary to validate the conclusions that can be drawn from this study.


Figure 2. Retain Data over Three Test Periods

## 5. CONCLUSION

Lexical knowledge is essential to L2 language acquisition; however, it is a daunting and unending task. The present study consisted of a two-group, pre/post/delayed post-test quasiexperimental design. The main objective of the study was to investigate whether EFL learners could learn new L2 words incidentally from reading texts that they studied in their course books and to examine whether there was an effect of simultaneous input modality on the rate of vocabulary learned. To see to what extent the words incidentally learned were recalled after training, the retainment of new words was also assessed one week after. The study revealed four major findings. First, without being exposed to any intentional instruction on target vocabulary, 5.53 words were learned by participants in the control group through reading, which was a gain of more than $49 \%$. Second, when written input was enhanced with aural input, it resulted in higher success in lexical development. The experimental group who listened to the audio recordings of the texts while simultaneously reading them learned 6.37 new
words on average, a gain of higher than $60 \%$. Third, a comparison between reading-only and listening-while-reading conditions showed that being exposed to more than one input simultaneously resulted in relatively higher gains in terms of lexical development, but the difference was relatively small. Finally, contrary to expectations, words learned incidentally through reading were more resistant to decay than words learned through listening-while-reading. Mean scores of one-week delayed post-test revealed that control group had an advantage over experimental group in retaining recently learned vocabulary.

The findings have several important implications for EFL classrooms. First of all, this study provides evidence that EFL learners can learn some new vocabulary through reading and retain it over a week without any deliberate effort or intention neither by the teacher nor by the learners themselves. It points to the importance of extensive reading in L2 development in general and L2 lexical development in specific as Krashen (2008) proposed. Therefore, EFL teachers may expose their students to reading input as much as possible in the classroom environment and encourage them to read in L2 outside the classroom. Secondly, the study shows that providing more than one input simultaneously (reading + listening) does not seem to significantly affect the incidental L2 vocabulary learning. Thus, learners need some deliberate word-focused instruction following the initial exposures to learn these words permanently. Besides, instead of exposing L2 learners to simultaneous input modalities, it may be more effective for teachers to increase the frequency of encounters with new words in the reading texts.

Like any experimental study, this quasi-experimental study has some limitations. First, the study analyzed and examined data from only 33 participants. Although the study started with ninety participants, 57 of them had to be omitted as they failed to complete all aspects of the study. Secondly, the sample consists of only English learners who are native speakers of Turkish, which makes it difficult to arrive at broad generalizations of the results outside the study sample. Also, the duration of the entire study is exactly three weeks. Future studies can reach a larger sample size and use longitudinal designs to understand better the role of input type and modality on incidental L2 vocabulary acquisition and retention. Finally, the materials used for treatment consisted of only five short unmodified reading texts compiled from A2 level course books because the primary purpose of the study was to investigate the rate of lexical gains through reading materials in classroom environments. Given that exposure frequency is a critical factor in incidental vocabulary acquisition, longer and modified texts may be utilized in future studies to investigate the role of the number of exposures on the rate of learning through reading and listening-while reading.

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## GENİŞLETILLMİS TÜRKÇE ÖZET

## íkinci dil edíniminde rascantisal sözcük edinimí: íşitsel girdí OKUMA SIRASINDA SÖZCÜK EDİNIMİNi KOLAYLAŞTIRIR MI?

## GíRiș

Rastlantısal sözcük öğrenimi üzerine yapılan birçok çalı̧ma, sözcüklere maruz kalma sıklığının ve girdi modunun (yazıll, işitsel, video, resimler vb.) yabancı dilde sözcük öğrenme üzerindeki etkilerini incelemiştir. Ayrıca, bu çalışmalar genel olarak ikinci dilde ileri düzeyde veya ileri düzeye yakın yeterliliğe sahip öğrenenlerle yürütülmüş ve öncelikle okuma becerisine odaklanmıştır (Brown ve diğerleri, 2008; Horst, 2005; Pellicer-Sánchez \& Schmitt, 2010; Rott, 1999; Waring \& Takaki, 2003). Ancak, ikinci dil yeterliliği düşük olan öğrencilerin rastlantısal sözcük edinimi ve eş zamanlı girdi yöntemlerinin bu öğrencilerin sözcük öğrenimi üzerindeki rolüne dair yapılan araştırmaların sayısı sınırlıdır. Ayrıca, Türkiye bağlamında anadili Türkçe olan öğrencilerle bu konuda yapılan çalışmalar yok denecek kadar azdır. Bu bağlamda, Türkiye'de bir devlet üniversitesinde yoğun İngilizce programında A2 seviyesinde İngilizce öğrenen öğrencilerle yapılan bu yarı deneysel çalışma salt okuma ve okurken dinleme modlarının rastlantısal sözcük öğrenimini etkileyip etkilemediğini incelemeyi amaçlamaktadır. Postpozitivist bir dünya görüşü, bu araştırmaya en uygun olanıdır, çünkü ele alınan araştırma soruları, farklı girdi yöntemlerinin (okuma ve okuma sırasında dinleme) ikinci dil öğretimi sırasında sözcüksel öğelerin rastlantısal edinimi üzerindeki rolünün tanımlanmasını gerektirir (Creswell, 2014).

## METOT

Anadili Türkçe olan ve İngilizce'de temel yeterliliğe (A2) sahip doksan öğrenci çalışmaya gönüllü olarak katıldı. Otuz üç öğrenci çalışmanın tüm oturumlarını tamamladı. Elli yedi katılımcı, yedi testen en az birini tamamlamadıkları için çalışmadan çıkarıldı. Kontrol grubu yaşları 17 ile 23 arasında değişen 17 kişiden ( 7 kadın, 10 erkek), deney grubu ise yaşları 18 ile 32 arasında değişen 16 kişiden ( 6 kadın, 10 erkek) oluşmaktadır.

Çalışma için farklı İngilizce ders kitaplarından seviyelendirilmiş (A2) beş okuma metni seçilmiştir. Çalışmanın ana amacı, ikinci dil öğrencilerinin herhangi bir doğrudan sözcük öğretimine maruz kalmadan çevrimiçi okuma sınıflarında öğrenebilecekleri ve hatırlayabilecekleri ortalama sözcük sayısını belirlemek olduğu için, deneysel/değiştirilmiş materyaller yerine ders kitaplarındaki materyaller tercih edildi. Katılımcılar, 25 hedef sözcükten oluşan toplamda beş metin okudular. Her metin, her biri metin boyunca iki veya üç kez sunulan beş hedef sözcük içeriyordu. Okuma metinlerinin uzunlukları benzerdi. Maruz kalma süresini kontrol edebilmek ve öğrencilerin hedef sözcüklere odaklanmasını önlemek için, okuma metinleri süreli PowerPoint slaytlarında sunuldu. Öğrenciler ekrandaki cümlelerin
uzunluğuna göre sadece iki veya üç cümle okudular. Öğrencilerin ve araştırmacının okuma metnini tartışabilmeleri için her slayttan sonra boş bir slayt eklenmiştir. Kontrol grubundan farklı olarak deney grubu okuma sırasında işitsel girdiye de maruz birakılmıştır.

Aynı 25 soruluk maddeler uygulamadan önce, hemen sonra ve bir hafta sonra katılımcıların sözcük bilgisini ölçmek için kullanıldı. Testler bir dosya paylaşım platformuna yüklendi ve katılımcılar testlere kendilerine gönderilen URL üzerinden erişti. Katılımcıların hedef sözcüklere ilişkin bilgileri çoktan seçmeli anlam-sözcük eşleştirme sorularıyla ölçüldü. Öğrencilerden her soruda yer alan beş seçenek arasından hedef sözcüğün doğru anlamını seçmeleri istendi.

Uygulamalardan önce, katılımcıların hedef sözcüklerle ilgili ön bilgileri çevrimiçi bir ön testle değerlendirildi. Öğrenciler sözlük veya çeviri programları kullanmamaları ve soruları sadece mevcut bilgilerine göre cevaplamaları konusunda uyarıldılar. Araştırmacı ön testten bir hafta sonra her iki grupla uygulamalara başladı.

Uygulamalar sırasında kontrol grubundaki katılımcılardan sadece metni okumaları istendi. Deney grubundaki katılımcılardan ise metnin ses kaydını dinlerken metni okumaları istendi. Her okuma etkinliğinden sonra, iki gruptaki katılımcılar da çevrimiçi bir testi (hemen son test) tamamladılar. Ön testte sorulan hedef sözcükler ile ilgili sorular okuduğunu anlama sorularına dahil edildi. Bu nedenle her bir hemen test beş sözcük bilgisi sorusunu içeren bir bölüm ve çalıştıkları metinle ilgili okuduğunu anlama sorularını içeren bir bölüm olmak üzere iki bölümden oluşuyordu. Okuduğunu anlama soruları tüm öğrencilerin kolaylıkla çözebileceği ve bu sorulara çok az zaman ayırabilecekleri şekilde hazırlandı. Katılımcıların okuduğunu anlama sorularına verdikleri cevaplar analize dahil edilmedi. Katılımcıların hem sözcük bilgisi hem de okuduğunu anlama sorularını yanıtlamalarının temel nedeni, çalışmanın asıl amacını fark etmemelerini sağlamak ve sonraki ögretim uygulamalarda sözcüklere bilinçli bir şekilde dikkat etmelerini önlemektir. Bir haftada tamamlanan beş uygulama seansında da aynı prosedür izlendi. Katılımcıların beş anlama testinde sözcük bölümlerinden aldıkları puanlar, anlık test puanlarını oluşturdu. Katılımcılar ertelenen son testi bir hafta sonra çevrimiçi olarak aldılar. Bütün uygulamalardaki test öğeleri aynıydı.

Sözcük-anlam eşleştirme testlerinde öğrencilerin çoktan seçmeli maddelere verdiği yanıtlar doğruluk açısından 1 (doğru cevaplar için) veya 0 (yanlış cevaplar için) olarak kodlanmıştır. Betimsel analiz yapmak ve katılımcıların sözcüksel kazanımlarının ortalamalarını ve yüzdelerini hesaplamak için SPSS, sürüm 25.0. kullanılmıştr. Araştırmacı testleri kendisi puanlamıştır.

## BULGULAR VE TARTIŞMA

Çalışmanın temel amacı, yabancı dil olarak İngilizee öğrenenlerin ders kitaplarındaki metinler aracılığıyla yeni sözcükleri rastlantısal öğrenip öğrenemeyeceklerini araştırmak ve eş zamanlı girdi yönteminin öğrenilen sözcük oranı üzerinde bir etkisi olup olmadığını incelemekti. Rastlantısal öğrenilen sözcüklerim öğretimden sonra ne ölçüde hatırlandığını görmek için bir hafta sonra yeni
sözcüklerin akılda kalması da değerlendirildi. Çalışma dört ana bulguyu ortaya çıkardı. İlk olarak, kontrol grubundaki katılımcılar hedef sözcükler ile ilgili herhangi bir kasıtlı ögretime maruz kalmadan okuma yoluyla \%49'dan fazla bir kazanımı işaret eden 5.53 sözcük öğrenmiştir. İkinci olarak, yazılı girdi işitsel girdiyle birleştirildiğinde sözcüksel gelişimde daha yüksek başarı ile sonuçlanmıştır. Metinleri okurken ses kayıtlarını dinleyen deney grubu, \% 60 'ın üzerinde bir kazanımla ortalama 6,37 yeni sözcük öğrendi. Üçüncüsü, salt okuma ve okurken dinleme koşulları arasında yapılan bir karşılaştırma, aynı anda birden fazla girdiye maruz kalmanın sözcüksel gelişim açısından nispeten daha yüksek kazançlarla sonuçlandığını gösterdi. Son olarak, beklentilerin aksine, okuma yoluyla rastlantısal öğrenilen sözcükler, okuma sırasında dinleme yoluyla öğrenilen sözcüklere göre bozulmaya karşı daha dirençliydi. Bir hafta gecikmeli son testin ortalama puanları, kontrol grubunun yakın zamanda öğrenilen kelime dağarcığını korumada deney grubuna göre daha avantajlı olduğunu ortaya koydu.

## SONUÇ

Bu çalışma iki gruplu, ön/son/gecikmeli son-test yarı deneysel desenden oluşmaktadır. Yukarıda belirtilen bulguların İngilizce sınıfları için birkaç önemli çıkarımı var. Her şeyden önce, bu çalışma, yabancı dil olarak İngilizce öğrenenlerin ne öğretmenleri ne de öğrencilerin kendileri tarafindan herhangi bir kasıtlı çaba veya niyet olmaksızın sadece okuyarak bazı yeni sözcükler öğrenebileceklerine ve bunları bir hafta boyunca akıllarında tutabileceklerine dair kanıt sunmaktadır. Bu sonuçlar, Krashen'in (2008) da önerdiği gibi, kapsamlı okumanın genelde ikinci dil gelişiminde ve özelde ikinci dilde sözcük gelişimindeki önemine işaret etmektedir. Bu nedenle, İngilizce öğretmenleri ögrencilerini sınıf ortamında mümkün olduğunca çok okuma girdisine maruz bırakmalı ve onları sınıf dışında yabancı dilde okumaya teşvik etmelidir. İkinci olarak, bu çalışma aynı anda birden fazla girdi sağlamanın (okuma + dinleme) ikinci dilde rastlantısal sözcük öğreniminde avantaj sağladığımı ancak uzun süre akılda tutmayı garanti etmediğini göstermektedir. Bu nedenle, öğrencilerin bu sözcükleri kalıcı olarak öğrenmek için ilk maruz kalmalarını takiben bazı kasıtlı kelime odaklı öğretimlere ihtiyaçları vardır. Ayrıca, öğretmenlerin okuma metinlerinde öğrencilerinin yeni sözcüklerle karşılaşma sıklığını artırması sözcük ediniminde etkili olabilir.


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