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## "Thank you for the music": Comparing two different approaches to the use of songs in the EFL class


#### Abstract

Pop songs have been claimed to provide a noteworthy source of second language (L2) input. While listening to songs in English is one of the most commonly reported out-ofclass activities among EFL learners, little research exists as to how different teaching approaches to the use of songs in the EFL class can enhance students' vocabulary learning. The present study aims to investigate two different instructional approaches to the use of songs in the L2 class in order to learn how to maximize vocabulary learning through this input source. Two groups of grade 8 Italian EFL learners followed a short treatment that used English pop songs in different conditions, which differed in instructional focus (explicit vs. implicit). The results of the study suggest that although vocabulary significantly improved in both conditions, the explicit approach led to more durable gains.


## Keywords

Vocabulary learning, explicit instruction, incidental learning, L2 songs, L2 listening, teenage EFL learners

## 1. Introduction

Listening to music is an activity that students frequently and voluntarily engage in outside the classroom that can also have a positive impact during classroom activities. For instance, songs help alleviate foreign language classroom anxiety (Dolean, 2015). Moreover, Murphey's (1992) analysis of the discourse of pop songs suggests that the language in songs is simple and repetitive, and often the lyrics are involuntarily rehearsed because of the song-stuck-in-my-head phenomenon (Murphey, 1990), all of which can facilitate vocabulary learning.

Despite the multiple reasons why songs might contribute to develop L2 learners' lexical knowledge, there is very little research investigating the potential of songs to promote vocabulary gains, especially in comparison to studies that have examined vocabulary learning from other input sources, such as reading or video viewing.

The existing empirical studies on vocabulary learning through songs suggest that they can effectively encourage vocabulary learning, both incidentally (Medina, 1990; Pavia, Webb \& Faez, 2019), as well as intentionally (Coyle \& Gómez-Gracia, 2014). Milton (2008) suggests that learning through songs is more efficient when learners have intention to learn; however, no study has compared vocabulary gains through songs in intentional vs. incidental learning conditions.

The present study aims to fill this gap in the current SLA literature by further examining how songs can be best used in the L2 classroom to maximize vocabulary learning. Two different types of instructional approaches (explicit vs. implicit) will be examined in order to extend our knowledge on how vocabulary learning can be promoted through the use of songs. As suggested by Ellis and Shintani (2014, p. 83), explicit instruction "caters to intentional learning", while implicit instruction "caters to incidental learning". In the present study, we will use the term "explicit teaching/instruction" or
"explicit condition" when describing a treatment that explicitly draws students’ attention to the target words in the song and includes follow-up vocabulary exercises. In contrast, when the focus of the song-related activity is on something other than the target words, we will refer to the treatment or condition as "implicit".

## 2. Literature Review

### 2.1. Listening for vocabulary learning

Teenagers independently spend time listening to music outside the classroom, as pointed out by Miranda (2013), who reported that in the US "on average, adolescents listen to music for up to three hours daily and accumulate more than 10,000 hours of active music listening throughout adolescence" (p. 10). That is why pop songs have been defined as "the motherese of adolescents" (Murphey \& Alber, 1985, p. 1) and such input should also be taken into consideration as valuable source of L2 learning (Schwarz, 2013).

Research on out-of-school exposure to English as a foreign language suggests that listening to music is always among the most common activities EFL learners engage in (De Wilde, Brysbaert, \& Eyckmans, 2020; Lindgren \& Muñoz, 2013; Muñoz, 2020; Schwarz, 2013). The possibility that songs afford of providing large quantities of L2 input is one of the reasons that Pavia et al. (2019) identified for their claim that songs constitute an important source of L2 learning. Another reason is the type of input they provide. Murphey's (1992) corpus analysis characterizes the discourse of pop songs as simple: repetitive, conversation-like, and slower than normal speech. Additionally, songs can contribute to the extension of vocabulary knowledge by recycling (Schmidt, 1990). Moreover, since students naturally listen to songs in their free time, their use in
classroom activities could potentially encourage a connection between in- and out-of-class contexts, which would allow for continuity and consolidation of what is learned in class. Such link between an L2 listening activity the students independently perform and listening activities in the classroom could possibly help students lower the anxiety related to performing listening tasks (Arnold, 2000; Elkhafaifi, 2005; In'nami, 2006),. Due to the transient nature of listening, when the information is only available for a limited amount of time and cannot be accessed again, such emotional factor normally plays a bigger role in listening activities than while reading or writing (Zhang \& Graham, 2020).

Despite all these positive aspects, songs are still considered as a one-off treat that teachers give students, rather than a regular activity, as demonstrated by their sporadic presence in textbooks (Tegge, 2018). The same can be said about SLA research on the topic: despite an extensive pedagogical literature supporting the efficiency of learning through songs (Tegge, 2018), most studies only focus on participants' self-reports, rather than empirically verified gains (Pavia et al., 2019).

Pavia et al. (2019) analysed to what extent vocabulary could be incidentally acquired by listening to pop songs. A group of 300 grade 5 and 6 students from Thailand listened to two songs over the course of two weeks. In particular, the researchers focused on three dimensions: spoken-form recognition, form-meaning connection and collocation recognition. The results showed statistically significant vocabulary gains derived from listening to songs, and also that the amount of times the song was heard had an impact on the spoken-form recognition results

In contrast, studies that have analysed how different types of out-of-school exposure are related to L2 proficiency often fail to find a strong relationship between listening to songs and different dimensions of L2 proficiency, including vocabulary
knowledge (De Wilde et al., 2020). One possible reason for the lack of strong correlations between listening to songs and L2 vocabulary knowledge can be that listening to songs does not require any kind of effort or attention on the part of the listener, who can be deeply engaged in doing something else while there is music in the background. In such scenario, "noticing", which is necessary for L2 learning (Schmidt, 1990), cannot be guaranteed. As Milton (2008) observed, "learners cannot daydream their way through songs or DVDs and expect to learn" (p. 235), and some sort of cognitive investment is necessary for vocabulary learning to occur (also outside the classroom). The significant gains demonstrated by Medina (1990) or Pavia et al. (2019) can be due to the fact that the studies were conducted in a classroom setting, where the intention to learn is more obvious than in listening for pleasure out of class.

### 2.2. Explicit instruction

Considering the vast amount of words that needs to be learned in order to understand authentic aural and written input (around 2,000-3,000 and 8,000-9,000 respectively) (Nation, 2006; Van Zeeland \& Schmitt, 2013), some scholars have argued that the bulk of vocabulary learning has to take place incidentally (see Milton, 2008). In this context, incidental learning is typically defined as learning that happens as a "byproduct" of meaning-focused activities, such as reading or listening (Hulstijn, 2003). Although many studies have demonstrated that vocabulary can be incidentally learned while reading (Cho \& Krashen, 1994; Webb \& Chang, 2015), watching TV (Montero et al., 2013; Peters \& Webb, 2018) or listening (Van Zeeland \& Schmitt, 2013), the reported gains tend to be rather modest and even more so in the case of listening.

In contrast, the meta-analysis by de Vos et al. (2018) found a large effect for vocabulary learning through meaning-focused listening practice. It should be pointed out that the meta-analysis consisted of audio-only, audio-visual materials, and studies that
included meaning-oriented tasks with and without interaction with the speaker. In fact, it is in the condition that included aural input plus interactive tasks that vocabulary learning was more significant, which could be due to enhanced or more elaborate processing than in the other conditions (Hulstijn, 2013).

Similarly, studies on reading have found that when learners are required to focus on the target vocabulary and perform explicit vocabulary-learning activities ("ReadPlus"), learning gains are larger than when there is no focus on vocabulary ("Read-Only") (Min, 2008; Paribakht \& Wesche, 1997; Peters, Hulstijn, Sercu \& Lutjeharms, 2009). In the study by Sonbul and Schmitt (2010), a group of EFL learners were exposed to 20 target words in a text. Half of the words were explicitly addressed by the teacher, who explained the meanings and wrote the target words in the blackboard and repeated them once, while the other half was ignored. The results of the study suggest that, although there were lexical gains under the Read-Only condition, the scores of the words that received instruction (Read-Plus) were higher, especially in terms of meaning recall.

The same pattern was confirmed in the case of vocabulary learning from listening by Zhang and Graham (2020), who compared vocabulary learning under four different conditions. There were three conditions that included explicit vocabulary teaching after listening to different passages, and one that only required learners to answer some comprehension questions ("no explanation"). An interesting finding of that study was that, although the three explicit conditions (i.e., "Listen-Plus") were more beneficial than no instruction, the learners in the "no explanation" condition also made some significant gains from pre- to post-test, providing evidence for incidental vocabulary learning from listening.

All these results point to the fact that, although incidental learning from reading, listening or TV viewing is possible, an additional focus on vocabulary typically promotes
higher gains, which is in line with other studies in SLA research that have highlighted the positive effects of explicit instruction (Ellis, 2010; Laufer, 2006; Lightbown, 2014).

In the case of songs, Coyle and Gómez-Gracia (2014) examined to what degree one song plus additional vocabulary-focused activities could promote vocabulary learning for preschool children (ages 5-6). The authors report that children experienced significant receptive vocabulary gains after three different sessions, which included listening to the same song seven times and vocabulary-focused activities. Productive knowledge, however, did not significantly improve.

Although there are studies examining incidental vocabulary learning through listening to songs (Pavia et al., 2019) as well as others on songs plus vocabulary activities (Coyle \& Gómez-Gracia, 2014), to the authors' knowledge, no study has compared two instructional approaches that differ in their degree of explicit vocabulary instruction in the case of songs. In the present study, songs are being analysed as a pedagogical tool, and it is therefore relevant to assess whether vocabulary learning from songs can be maximized if there is an additional instructional focus on target vocabulary. Additionally, it is also interesting to analyse whether vocabulary can be picked up incidentally, while the teacher is using songs for a different purpose.

## 3. The present study

The present study aims to compare vocabulary short- and long-term gains after listening to a song and performing additional vocabulary-related exercises (in line with "Read-Plus" or "Listen-Plus" conditions) versus listening to a song with no focus on the target vocabulary. In order to do this, we assessed participants' knowledge of the target vocabulary one day before listening to the songs, one day after listening and a month later.

In view of the results of previous studies that have shown that focused vocabulary activities or other strategies that promote elaborate word processing are more successful than incidental learning conditions, we expect that focusing explicitly on the target vocabulary will promote significantly more learning than when such focus is lacking. Similarly, considering other studies that have examined vocabulary learning through songs, we expect short-term gains to be higher than long-term gains (e.g., Pavia et al., 2018).

## 4. Methodology

### 4.1. Participants

The study was carried out in an Italian private school. The participants included in the current study were in grade 8 (12-13 years old) who were receiving 3.5 h of English instruction per week and were all monolingual Italian speakers. Although we do not have quantitative data about extra-curricular exposure, according to the teachers' reports, the students had equivalent English exposure outside the school. There were two classes in grade 8 and all the students were initially considered for the study ( $n=46$ ); however, many participants had to be excluded because they were not granted participation by parents or missed some of the sessions. The final sample consisted of 27 participants (19 boys and 8 girls), 11 in group 1 ( 6 boys and 5 girls) and 16 in group 2 ( 13 boys and 3 girls).

Even though we used a counterbalanced design (see Treatment for more details), we wanted to make sure that the students in the two groups (which were the two intact classes) had comparable general vocabulary knowledge and proficiency. Two different tests were performed: the $1,000,2,000$ and 3,000 levels of the monolingual version of the Vocabulary Size Test (VST) (Nation \& Beglar, 2007), and Part 1 of the Oxford Quick

Placement Test (OQPT) (questions 1-40) (UCLES, 2001). These tests were chosen bearing in mind participants' proficiency, as estimated by their teachers, as well as practical considerations for test administration. Two independent samples $t$-tests confirmed that there were no significant differences in terms of proficiency between Group $1(M=16.55 ; S D=4.18)$ and Group $2(M=17.81 ; S D=3.37)$ on the OQPT: $t(25)$ $=-.871, p=.392$. Similarly, there were no significant differences between Group $1(M=$ 13.91; $S D=5.08)$ and Group $2(M=13.88 ; S D=5.69)$ on the VST: $t(25)=.16, p=.987$.

### 4.2. Treatment

In order to obtain more data about the two conditions and control for potential group and song differences, a counterbalanced design in terms of mode of instruction per song was adopted. All the students underwent two consecutive days of treatment working with two different songs and each lesson lasted 50 minutes. The treatment was administered by the first author, who had previously been a teacher in the school. The songs chosen were two American pop singles from 2005: "Move Along" by The AllAmerican Rejects and "Have a Nice Day" by Bon Jovi. Such songs were chosen because the students would not be familiar with them, had a catchy rhythm, and were likely to be considered appealing.

The two groups listened to both songs and did activities related to them. In each group, the teacher followed an explicit teaching approach to the target words for one song but not for the other, in a counterbalanced fashion (see Table 1).
[Table 1]

The plan for the lessons that had an explicit focus on the target vocabulary was the following: first, all the students watched the official video-clips of the songs without written lyrics (listening 1). Then, after icebreaker activities, the students were given a handout including the written lyrics of the song, where the target words were highlighted in red (Appendix A) and they listened to the song again following the lyrics (listening 2). After this second listening, the instructor went through all the target words and made sure the students understood their meaning. Then, listening 3 took place during a classroom activity that allowed the students to practice the target words with an activity called "hot seat". During this task, the students were divided into 4 or 5 groups and each team sent one member to the hot seat. While the song was playing, the teams could decide which word from the song to ask the students from the opposite teams that were on the hot seat. There was a plenary with a sing-along activity (listening 4), in which the students sang along while reading the lyrics and had to emphasize (sing especially loudly) when the target words appeared while putting their hands up.

As this research took place in real classrooms and students were expecting to learn something about English through the songs, in the implicit condition, the teachers directed the students' attention towards the pronunciation of a different set of target words. Instruction targeted English words with challenging pronunciation for Italian learners (aspirated $/ \mathrm{h} /$ and English dental fricatives), isolated the words in the songs with these sounds (e.g., hand, hope, there, through, etc.), highlighted them in the written lyrics, and then did activities to practice their pronunciation. Under this condition, the learning of the target words could be considered incidental, as learners' attention was not drawn towards the target vocabulary but towards other words. Under both the implicit and the explicit condition, the learners listened to the songs the same number of times. Nevertheless, in the implicit condition the emphasis was never on the meaning of words
and after the initial ice-breaking activities the students were asked to point out what they thought the words highlighted had in common and proceeded to practice their pronunciation. After that, listening 3 was carried out during a task called "Chinese whisper", where the students were divided into 2 teams and had to whisper in each other's ears one of words they practiced, until the last two people had to say them in front of the whole class and pronunciation was assessed by all peers. Listening 4 was once again a sing-along activity. The only difference between the two conditions refers to the words that were highlighted in the written lyrics and practiced during the classroom activity.

### 4.3. Target words

As in Pavia et al. (2019), both single words and multi-word units were selected. There were 16 target words (eight per song), including 11 single words and five multiword units. See Table 2 for the list of words.
[Table 2]

The main criterion in the choice of target words was that they were likely to be unknown by the participants, which was confirmed by their teachers. In order to check the lexical coverage, the lyrics of each song were analysed with Vocabulary Profilers on Lextutor (Cobb, n.d.), which breaks texts down by word frequencies according to the British National Corpus/ Corpus of Contemporary American English (BNC/COCA) word family lists (see Table 3 and 4 for details):
[Table 3]
[Table 4]

For both songs, $95 \%$ lexical coverage was obtained with knowledge of the 1,000 most frequent words, and, if we assume this an adequate coverage for listening comprehension (Van Zeeland \& Schmitt, 2013), the songs can be considered appropriate for the current participants (on average their vocabulary size was 1,489 , according to the scores of the VST). A lexical coverage of $98 \%$ in the case of "Move Along" is reached after knowing the first 2,000 most frequent word families, but in "Have a Nice Day", it is only reached after knowledge of the most frequent 5,000. According to these data, and also considering the typical lexical coverage in teacher-selected songs reported by Tegge (2018) (2,000 and 4,000 word families for $95.5 \%$ and $98.2 \%$ coverage respectively), the second song might be more challenging and vocabulary learning might be more difficult for "Have a Nice Day" because of the higher vocabulary load. However, since the design was counterbalanced (see Table 1), this difference should not represent a problem for the results, as the vocabulary scores for the explicit and implicit conditions will include the target words from both songs.

### 4.4. Tests

The design of the present study includes a pre-test, immediate post-test and delayed post-test in order to examine short- and long-term vocabulary gains after controlling for previous knowledge of the target words. As in most studies that examine vocabulary learning from reading or listening (including songs), both productive and receptive vocabulary knowledge were analysed. Even though receptive vocabulary knowledge might be more easily developed by receiving input in the L2, many studies have found that learners are also able to actively produce some target forms after being exposed to them in a text, song or listening passage, especially when there is a special
focus on vocabulary learning (e.g., Sonbul \& Schmitt, 2013). Therefore, we expected to find clearer differences between conditions (in favour of the explicit treatment) in productive vocabulary knowledge. All the tests were piloted and administered by the first author.

The productive vocabulary test (Appendix C) was a C-test: the participants were presented with half of the word embedded in a sentence and they had to complete it. When the word was successfully produced, the answer was coded as a 1 , when incorrect or left blank, it was coded as 0 .

The receptive vocabulary knowledge test (Appendix D) was a multiple-choice test, where students had to choose the correct definition in English for each target word. The options were based on antonym forms or on words that had similar spelling but different meaning. Most definitions were taken from the MacMillan English Dictionary (Rundell, 2002). Participants were also presented with an "I don't know" option to minimize guessing. Correct answers were coded as 1 and incorrect as 0 .

### 4.5. Procedure

The day before the treatment, the students performed the general vocabulary knowledge and proficiency tests (VST and OQPT respectively). In the same session, they did the pre-test including the target items, first the productive vocabulary test and then the receptive test in order to avoid possible priming effects. The immediate post-test included the same productive and receptive vocabulary tests and was performed at the end of the session in which the students listened to the song that included the target words. Then, one month later, the students performed the delayed post-test. However, because
of restrictions in data collection time imposed by the school, only the receptive test was administered.

Participants did all the tests in groups in the computer laboratory of the school, via the online form builder and creator JotForm (www.jotform.com) under the supervision of their teacher and the researcher. In order to ensure that the students received aural input during testing (which would be coherent with the sort of treatment they received) a native English speaker read aloud the tests' instructions and test items.

## 5. Statistical analyses

Since none of the accuracy measures had a normal distribution, two Generalized Linear Mixed Models (GLMMs) were run using SPSS v25 (IBM, 2017) with a repeated measures diagonal structure, a random intercept for subject and each of the two measures as dependent variables (productive knowledge accuracy and receptive knowledge accuracy). Both variables had a binomial distribution modelled with a Logit link. All models included subject and item as random factors, and the same fixed effects structure, i.e., time (pre-test, immediate post-test and delayed post-test for the receptive test; pretest and immediate post-test for the productive test), and instructional focus (explicit, implicit), with their paired interactions.

## 6. Results

### 6.1. Productive vocabulary knowledge

The descriptive statistics for productive knowledge accuracy are laid out in Table 5, including pre-, post-test scores as well as immediate gains (post-test minus pre-test scores) and relative gains in terms of percentage of words learned, considering the scores
of the pre-test. As in the case of the receptive knowledge test, the variables were categorical and the minimum value for each item was 0 while the maximum was 1 .
[Table 5]

Table 5 shows that there were gains between pre-test and immediate post-test in the two conditions, although explicit instruction seemed to be more beneficial than implicit. Table 6 shows the results of the GLMM. Statistically significant results appear in bold with the variable with the highest scores in parentheses.

## [Table 6]

The results of the GLMM suggest that the effect of time was significant $[F(1,860)$ $=144.63, p<.001]$, with overall post-test scores being significantly higher than pre-test scores. Similarly, the effect of instruction was significant $[F(1,860)=10.518, p=.001]$, with the scores of explicit instruction being higher than implicit instruction. Finally, the interaction between time and instruction type was not significant $[F(1,860)=1.123, p=$ .290]. We also performed pairwise comparisons to examine the results further. The results suggest that, while pre-test scores were comparable for implicit and explicit instruction, post-test scores were significantly higher for the explicit instruction condition ( $p<.001$ ). Moreover, when analysing the two conditions separately, the results suggest that vocabulary improved significantly both under the explicit ( $p<.001$ ) and implicit ( $p<$ .001) conditions.
6.2. Receptive vocabulary knowledge

Table 7 shows the results of the descriptive statistics for the receptive vocabulary test, which show a similar trend.
[Table 7]

Participants improved between pre-test and immediate post-test and then experienced a subsequent decrease on the delayed post-test. However, there were still long-term gains in both conditions, especially for the one with an explicit vocabulary focus. Compared to the productive gains, these gains seem to be lower, but this probably due to the low productive pre-test scores.

The GLMM (see Table 8) shows that there was a main effect of time $[F(2,1,290)$ $=16.6, p<.001]$, with immediate and delayed post-tests scores being significantly higher than pre-tests scores, and instructional focus $[F(1,1,290)=13.4, p<.001]$, in favour of the explicit condition. No interaction was found between time and condition $[F(2,1,290)$ $=2.0, p=.130]$. As was the case for productive knowledge, receptive knowledge gains were significant for the two conditions on the immediate post-test [explicit: $p<.001$; implicit: $p=.009$ ), but only for the explicit group on the delayed post-test ( $p<.001$ ) (see Table 8).
[Table 8]

## 7. Discussion

The aims of the current study were to empirically assess two different approaches to vocabulary learning though songs in a classroom setting and examine to what degree
an explicit approach that focuses on vocabulary teaching through songs leads to differential vocabulary gains as compared to an implicit method of instruction of the target vocabulary. Two grade 8 intact classes listened to two pop songs in different conditions in a counterbalanced fashion, in which type of instructional vocabulary focus (explicit vs. implicit) was manipulated. The statistical analyses performed showed that songs promoted significant short-term productive and both short- and long-term receptive vocabulary gains (in all analyses there was a significant main effect of time). Since there was no comparison group, no claims can be made as to whether vocabulary learning can be fostered in this way better than through other approaches or other input sources. However, this was not the main aim of the study, which focused on comparing two instructional approaches to the use of songs.

The results showed a main effect of instructional approach, indicating that the words that were explicitly taught were more accurately produced and recognized on the vocabulary tests. Although the interaction between time and type of instruction was not significant, a trend was observed in the pairwise comparisons in which participants obtained significantly higher scores for the words that were explicitly taught on the immediate and delayed vocabulary post-tests. These findings are in line with the literature supporting the effectiveness of focused/explicit instruction for L2 vocabulary acquisition through reading or listening. Similar results were obtained by Sonbul and Schmitt (2010) in the case of reading, where "Read-Plus" was more beneficial than "Read-Only", especially in terms of productive knowledge; or Pujadas and Muñoz (2019) for video viewing (in which pre-teaching was significantly more conducive to vocabulary learning than no pre-teaching). In the same line, Zhang and Graham (2020) also found that explicit teaching of target words after listening to a passage led to higher vocabulary gains than no explanations. As suggested by Hulstijn (2013), "input plus" conditions, in which
learners are instructed to focus on the target words are more conducive to learning than purely incidental conditions, as they probably encourage deeper word processing that contributes to learning and retention. We speculate that this could have also been the case in our explicit condition; however, we do not have any empirical evidence of how the participants actually processed the target words.

Another interesting finding from the analyses comparing participants' scores on pre- and post-test under each condition separately is that significant vocabulary learning took place under both conditions: i.e., when the target words were explicitly taught as well as when they were not. These results provide further support for the potential of songs to promote incidental vocabulary learning (Pavia et al., 2019). The gains under the implicit condition were significant on the immediate post-test (both productive and receptive) but not on the delayed post-test (receptive). This finding mirrors the results reported by Zhang and Graham (2020), who found that the learners who received no explicit instruction on the target words after listening also experienced significant shortterm vocabulary gains but no significant long-term gains.

## 8. Limitations and further research

The first limitation of the present study is that it was carried out using just two songs and the treatment only lasted two days. Although other studies have also been performed with just two songs (e.g., Pavia et al., 2019), and the findings already suggest certain trends as to how songs can promote vocabulary learning, more research should be performed including more songs and more sessions. Another limitation is the sample size, which was considerably reduced from the original sample. Additionally, more research should be performed in order to isolate the contribution of songs in the vocabularyfocused treatment by comparing this treatment with one exclusively based on the
vocabulary activities without the songs. As in other studies comparing Read-Only or Listen-Only versus Read-Plus or Listen-Plus, in the present study, it is not possible to isolate the unique contribution of songs to the vocabulary gains in the "plus" or "explicit" condition because they were accompanied by other vocabulary-related activities. Future studies should also include conditions which exclusively include explicit vocabulary learning activities. Another limitation is that, since there was no control group, we cannot rule out the possibility that part of the learning might have come from testing. Data from a control group would be necessary in order to provide stronger evidence that the significant gains come exclusively from the treatment.

## 9. Conclusions and pedagogical implications

The present study shows that vocabulary can be learned through songs more effectively when there is an explicit instructional focus than when such focus is lacking. As Bergström, Norberg, and Nordlund (2021) suggest, teachers often have the belief that vocabulary is "picked up along the way". Our results suggest that, although this is partly true, explicitly addressing novel words in class leads to more durable learning gains. This is probably due to deeper and more elaborate word processing (Hulstijn, 2013).

Even though our study shows significant immediate gains in the implicit condition, it is not clear whether these findings can be easily extrapolated to listening for pleasure as an out-of-class activity. In a classroom setting, learners are probably more focused on learning than when they are listening for pleasure, and the fact that they pick up words that are not taught when they are exposed to songs in the class probably shows this general orientation towards intentional learning that is typical of classroom settings.

Considering the high motivation to listen to music in English outside class that EFL learners typically demonstrate, teachers should take advantage of this and provide them with strategies to maximize vocabulary learning from songs not only in class but
also outside the class. Teachers can promote students' interest in learning through this type of aural input through conscious engagement with vocabulary, all while familiarizing with authentic L2 listening materials.

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## Tables

Table 1. Vocabulary treatment through songs in terms of teaching approach

| Group | "Move Along" | "Have a Nice Day" |
| :--- | :--- | :--- |
| 1 | Implicit | Explicit |
| 2 | Explicit | Implicit |

Table 2. Target vocabulary

|  | Target Vocabulary | Frequency Within Song |
| :---: | :---: | :---: |
| "Move Along" | to waste | 1 |
|  | fill | 1 |
|  | to fall | 1 |
|  | sinking | 1 |
|  | to move along | 29 |
|  | to make it through | 5 |
|  | deceiving | 1 |
|  | to right | 4 |
| "Have a Nice Day" | shining | 3 |
|  | standing | 3 |
|  | dice | 3 |
|  | ledge | 3 |
|  | to stand my ground | 1 |
|  | brave | 1 |
|  | to take a stand | 1 |
|  | dead-end street | 1 |

Table 3. "Move Along" lexical profile

| Frequency | Families (\%) | Types (\%) | Tokens (\%) | Cum. token (\%) |
| :--- | :---: | :---: | :---: | :---: |
| K-1 Words: | $64(97.0)$ | $75(96.15)$ | $323(99.4)$ | 99.4 |
|  |  | Coverage 95 |  |  |
| K-2 Words: | $1(1.5)$ | $1(1.28)$ | $1(0.3)$ | 99.7 |
|  |  | Coverage 98 |  |  |

K-3 Words:
K-4 Words:
$\begin{array}{lllll}\text { K-5 Words: } & 1(1.5) & 1(1.28) & 1(0.3)\end{array}$
K-6 Words:

Table 4. "Have a Nice Day" lexical profile

| Frequency | Families (\%) | Types (\%) | Tokens (\%) | Cum. Token (\%) |
| :--- | :---: | :---: | :---: | :---: |
| K-1 Words: | $96(91.4)$ | $111(90.98)$ | $343(95.0)$ | 95.0 |
|  |  | Coverage 95 |  |  |
| K-2 Words: | $5(4.8)$ | $5(4.10)$ | $7(1.9)$ | 96.9 |
| K-3 Words: |  |  |  |  |
| K-4 Words: | $1(1.0)$ | $1(0.82)$ | $3(0.8)$ | 97.7 |
| K-5 Words: | $2(1.9)$ | $2(1.64)$ | $4(1.1)$ | 98.8 |
|  |  | Coverage 98 |  | $9(0.8)$ |
| K-6 Words: | $1(1.0)$ | $1(0.82)$ |  | 99.6 |

Table 5. Descriptive statistics (maximum 1) for productive vocabulary knowledge (means and SDs in parentheses)

|  | Pre-test | Post-test | Immediate gains | Immediate relative gains |
| :---: | :---: | :---: | :---: | :---: |
| Implicit | $.06(.23)$ | $.33(.47)$ | $.27(.23)$ | $28.72 \%$ |
| Explicit | $.08(.28)$ | $.52(.50)$ | $.44(.28)$ | $47.82 \%$ |

Table 6. Results of GLMM productive vocabulary knowledge

| Source | $F$ | df1 | df2 | $p$ | Time |  | Instruction |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time | 144.63 | 1 | 860 | <.001 | $\begin{gathered} \mathrm{T} 2-\mathrm{T} 1: .353 \\ p<.001 \text { (T2) } \end{gathered}$ |  |  |  |
| Instruction | 10.518 | 1 | 860 | . 001 |  |  | E-I: .094, $\boldsymbol{p}=.002$ (E) |  |
| Time*Instruction | 1.123 | 1 | 860 | . 290 | I | E | T1 | T2 |
|  |  |  |  |  | $\begin{gathered} \mathrm{T} 2-\mathrm{T} 1: ~ .266 \\ p<.001(\mathrm{~T} 2) \end{gathered}$ | $\begin{gathered} \mathrm{T} 2-\mathrm{T} 1: .446 \\ p<.001(\mathrm{~T} 2) \end{gathered}$ | $\begin{aligned} & \text { E-I: -.025, } \\ & p=.202 \end{aligned}$ | $\begin{aligned} & \text { E-I: .205, } \\ & p<.001(\mathrm{E}) \end{aligned}$ |

$\mathrm{T} 1=$ pre-test; $\mathrm{T} 2=$ immediate post-test $; \mathrm{I}=$ implicit; $\mathrm{E}=$ explicit.

Table 7. Descriptive statistics receptive vocabulary knowledge (means and SDs in parentheses)

|  | Pre-test | Post-test | Delayed <br> post-test | Immediate <br> gains | Long-term <br> gains | Immediate <br> relative <br> gains | Long-term <br> relative <br> gains |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Implicit | $.24(.47)$ | $.35(.48)$ | $.30(.46)$ | $.11(.21)$ | $.06(.22)$ | $14.47 \%$ | $7.89 \%$ |
| Explicit | $.25(.44)$ | $.51(.50)$ | $.42(.49)$ | $.26(.25)$ | $.17(.29)$ | $34.67 \%$ | $22.67 \%$ |

Table 8. Results of GLMM receptive vocabulary knowledge

| Source | $F$ | df1 | df2 | $P$ | Time |  | Instruction |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time | 16.6 | 2 | 1,290 | < . 001 | $\begin{aligned} & \text { T2-T1: .186, } p \\ & \text { T3-T1: .116, } p \\ & \text { T3-T2: -.070, } \end{aligned}$ | $\begin{aligned} & <.001(\mathrm{~T} 2) \\ & <.001(\mathrm{~T} 3) \\ & p=.040 \end{aligned}$ |  |  |  |
| Instruction | 13.4 | 1 | 1,290 | < . 001 |  |  | E-I: .10, $p<.001$ |  |  |
| Time*Instruction | 2.0 | 2 | 1,290 | . 130 | $\begin{aligned} & \mathrm{I} \\ & \hline \text { T2-T1: .113, } \\ & \boldsymbol{p = . 0 0 9} \text { (T2) } \\ & \text { T3-T1: .066, } \\ & p=.121(\mathrm{~T} 3) \\ & \mathrm{T} 3-\mathrm{T} 2: ~-.047, \\ & p=.294 \end{aligned}$ | $\begin{aligned} & \mathrm{E} \\ & \hline \text { T2-T1: .263, } \\ & \boldsymbol{p}<. \mathbf{0 0 1}(\mathrm{T} 2) \\ & \text { T3-T1: .172, } \\ & \boldsymbol{p < . 0 0 1 ~ ( T 3 ) ~} \\ & \text { T3-T2: -.092, } \\ & p=.060 \end{aligned}$ | $\begin{aligned} & \hline \text { T1 } \\ & \hline \text { E-I: . } 019, \\ & p=.638 \end{aligned}$ | $\begin{aligned} & \mathrm{T} 2 \\ & \hline \mathrm{E}-\mathrm{I}: .169, \\ & p<.001(\mathrm{E}) \end{aligned}$ | $\begin{aligned} & \mathrm{T} 3 \\ & \hline \mathrm{E}-\mathrm{I}: .125, \\ & p=.008(\mathbf{E}) \end{aligned}$ |

$\mathrm{T} 1=$ pre-test; $\mathrm{T} 2=$ immediate post-test $; \mathrm{T} 3=$ delayed post-test; $\mathrm{I}=$ implicit; $\mathrm{E}=$ explicit.

## Appendix A. Song lyrics

## "Move Along" - The All American Rejects

Go ahead as you waste your days with thinking
When you fall, everyone stands
Another day, and you've had your fill of sinking
With the life held in your
Hands are shaking cold
These hands are meant to hold

Speak to me
When all you got to keep is strong
Move along, move along like I know you do
And even when your hope is gone
Move along, move along just to make it through
Move along
Move along
So a day when you've lost yourself completely
Could be a night when your life ends

Such a heart that will lead you to deceiving
All the pain held in your
Hands are shaking cold
Your hands are mine to hold
Speak to me
When all you got to keep is strong
Move along, move along like I know you do

And even when your hope is gone
Move along, move along just to make it through
Move along
(Go on, go on, go on, go on)
When everything is wrong, we move along
(Go on, go on, go on, go on)
When everything is wrong, we move along
Along, along, along, along
When all you got to keep is strong
Move along, move along like I know you do
And even when your hope is gone
Move along, move along just to make it through
When all you got to keep is strong
Move along, move along like I know you do
And even when your hope is gone
Move along, move along just to make it through
When all you got to keep is strong
Move along, move along like I know you do (Know you do)
And even when your hope is gone
Move along, move along just to make it through
Right back what is wrong
We move along
(Go on, go on, go on, go on)
Right back what is wrong
We move along
(Go on, go on, go on, go on)
Right back what is wrong
We move along
(Go on, go on, go on, go on)
Right back what is wrong
We move along

## "Have a Nice Day" - John Bon Jovi

Why, you wanna tell me how to live my life?
Who, are you to tell me if it's black or white?

Mama, can you hear me? try to understand
Is innocence the difference between a boy and a man My daddy lived the lie, it's just the price that he paid

Sacrificed his life, just slavin' away
Oh, if there's one thing I hang onto
That gets me through the night
I ain't gonna do what I don't want to
I'm gonna live my life
Shining like a diamond, rolling with the dice
Standing on the ledge, I show the wind how to fly
When the world gets in my face
I say, have a nice day
Have a nice day
Take a look around you; nothing's what it seems
We're living in the broken home of hopes and dreams
Let me be the first to shake a helping hand
Anybody brave enough to take a stand
I've knocked on every door, on every dead end street
Looking for forgiveness
What's left to believe?
Oh, if there's one thing I hang onto
That gets me through the night

I ain't gonna do what I don't want to
I'm gonna live my life
Shining like a diamond, rolling with the dice
Standing on the ledge, I show the wind how to fly
When the world gets in my face
I say, have a nice day
Have a nice day
Oh, if there's one thing I hang onto
That gets me through the night
I ain't gonna do what I don't want to
I'm gonna live my life
Shining like a diamond, rolling with the dice
Standing on the ledge, I show the wind how to fly
When the world gets in my face
I say, have a nice day
Have a nice day
Have a nice day
Have a nice day
Have a nice day
When the world keeps trying, to drag me down
I've gotta raise my hands, gonna stand my ground
Well I say, have a nice day
Have a nice day
Have a nice day

## Appendix C: Productive vocabulary test

Completa le frasi con le parole mancanti
(Complete the sentences with the missing words)

1. Don't was $\qquad$ my time.
2. Don't run on the stairs, you might fa $\qquad$ .
3. The police told the bystanders to mo $\qquad$ alo $\qquad$ .
4. I have had my fi $\qquad$ of emotions for today.
5. The ship is sin $\qquad$ .
6. I know this is difficult, but we can ma $\qquad$ i $\qquad$ thr $\qquad$ .
7. He is always telling lies. He's a very dece $\qquad$ person.
8. You need to ri $\qquad$ what you did wrong. Stop fighting.
9. It was a gorgeous day; the sun was shi $\qquad$ bright.
10. You should all be sta $\qquad$ when the teacher comes in.
11. To play monopoli you need a di $\qquad$ .
12. The dove is eating on the window led $\qquad$ .
13. I had to sta $\qquad$ m $\qquad$ gro $\qquad$ , I could not do what he wanted me to.
14. Firemen are very br $\qquad$ .
15. Let's ta $\qquad$ a sta $\qquad$ ! This is unfair!
16. Make a U-turn! This is a de $\qquad$ e $\qquad$ st $\qquad$ !

## Appendix D: Receptive vocabulary test

Scegli quale delle opzioni è la definizione della parola in maiuscolo
(Choose which option is the definition of the word in capital letters)

1. TO WASTE

- touse more of something than is necessary, or to use it in a way that does not produce the best results.
- to have a particular flavour.
- to glue paper onto a surface using paste.
- to get more and more of something over a period of time.
- I don't know

2. TOFALL

- to move upwards or to a higher position.
- to be in a particular state as a result of an emotion or a physical feeling.
- to move quickly downwards from a higher position, usually by accident.
- to move more slowly than other people so that you are behind them.
- I don't know

3. TO MOVEALONG

- totry to prevent something from happening, especially because you do not approve of it or think it is harmful.
- to do something so difficult that it seems almost impossible.
- to prepare to destroy or defeat someone or something.
- to progress or develop, or to make something progress or develop.
- I don't know

4. FILL

- someone who does another person's work while they are away.
- an act of filling something until it is completely full, especially the petrol tank of a car.
- when you feel no emotion, interest, or purpose.
- so much of something that you do not want any more.
- I don't know


## 5. SINKING

- becoming completely understood.
- disappearing below the surface of the water.
- succeeding or failing, without any help.
- disappearing above the surface of the water.
- I don't know

6. MAKE IT THROUGH

- to die as a result of an illness or an accident.
- not to tell the truth.
- to treat something as if it is more important than it really is.
- to survive a dificult time.
- I don't know


## 7. DECEIVING

- tricking someone by behaving in a dishonest way.
- producing the final result of a situation or event.
- approving of an idea or of a person or organization and help them to be successful.
- helping someone when they are having a difficult time.
- I don't know

8. TO RIGHT

- to make a right turn at a crossroads.
- to be right in a discussion.
- to have the right to do something.
- to make something go back into the right state.
- I don't know

9. SHINING

- scaring.
- bright.
- with no light.
- being shy.
- I don't know.

10. STANDING

- having your body in a downright position not supported by your feet.
- holding something firmly without shaking or moving it.
- having your body in an upright position supported by your feet.
- holding something firmly shaking and moving it.
- I don't know

11. DICE

- a flat piece of food that has been cut from something larger
- water that has frozen and become solid
- a rectangular piece of paper with spots or images to play
- a small block of wood or plastic with six sides marked with spots,
- I don't know

12. LEDGE

- the part of something that is furthest from its centre.
- a narrow surface that continues out from the side of a cliff, wall, or other surface.
- a piece of equipment consisting of a metal frame with a strong material stretched across it that you can jump up and down on for exercise or as a sport.
- a line of bushes or small trees growing close together around a garden or field.
- I don't know


## 13. TO STAND MY GROUND

- not retreat in the face of opposition.
- to stand up from the ground.
- to mow the lawn of my garden.
- retreat in the face of opposition.
- I don't know

14. BRAVE

- cautious.
- capable of dealing with danger or pain, seeming to be frightened.
- capable of dealing with danger or pain, without seeming to be frightened.
- incapable of dealing with danger or pain, seeming to be frightened.
- I don't know

15. TO TAKE ASTAND

- to stand up.
- to state your opinion and refuse to change it.
- to state your opinion and then change it.
- to go to a fair.
- I don't know


## 16. DEAD-END STREET

- a dangerous street in a city
- an end of a something that has multiple exits.
- a street in an open neighbourhood.
- an end of something that has no exit.
- I don't know

