

Use of online English songs in fostering morphological awareness: A small-scale experimental study

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This paper reports on a case study describing the development of students' morphological awareness over one academic semester using online English songs. It outlines the use of two tests to measure the receptive and productive knowledge of three types of morphology: inflection, derivation, and compounds. The participants were 80 Chinese EFL students divided into a control group and an experimental group. The former received typical explicit instructions on morphology only while the latter received the same instructions accompanied by online English songs. Results reveal that both groups demonstrated an improvement in learning morphological knowledge. However, the group using online English songs tended to achieve higher scores than the group without access to the songs. This distinction was also consistent in the retention post-test of morphology knowledge. Data collected from interviews further confirmed these findings. Although results showed an overall increase in scores at the end of the course with the gap between receptive and productive knowledge of morphology bridged, the receptive and productive knowledge of compound words actually widened.

Keywords: morphology; English song; receptive knowledge; productive knowledge; EFL; Chinese learners

Introduction

Effective vocabulary learning is a crucial aspect of teaching English as a foreign language (EFL). However, EFL students often encounter insuperable barriers while learning the thousands of words that they need. It appears that the process of learning vocabulary is an incremental process wherein words can only be acquired through small steps (Nation, 2001; Schmitt, 2010). Likewise, there is a widely-held belief among classroom experts and researchers that learning morphology is a challenging part of vocabulary learning because it involves a mental system for which it is necessary to form a conscious awareness of and build a capacity for reflecting on and manipulating the morphemic structures of words (Kirby et al., 2012; Tunmer, Herriman, & Nesdale, 1988).

One of the assumed difficulties is that EFL learners lack sufficient exposure to new morphological structures in a classroom situation. This may prevent them from isolating word forms from the language input, locating embedded meanings, and linking the meanings to the word forms (Rohde & Tiefenthal, 2000). Another prominent hurdle is that learning new morphology is arduous in nature. For example, EFL students still find it difficult to master different dimensions of word knowledge even after reading or hearing specific words several times (Teng, 2016b). In addition, EFL students often learn new words individually and receptively without paying particular attention to their inherent properties (Schmitt, 2008). Therefore, bearing these constraints in mind, it can be assumed that it is appropriate and necessary to seek available resources which can

engage learners' interest and highlight target items to be acquired. In this context, the use of online songs is regarded as a worthwhile approach to explore and pursue (Lubliner & Scott, 2008).

Learning from songs is widely recognized as a supplemental teaching approach in EFL settings (Foncesa Mora, 2000; Schön et al., 2008). Three important elements (sounds, rhythm and intonation) in a song are regarded as dimensions that can effectively attract learners' attention, and two other elements (melody and repetitive structure) provide additional language exposure to learners, thus facilitating their word learning and retention ability (Forster, 2006). The present study explored the use of online songs as a tool to maximize the benefits of using songs and tap into the potential for developing EFL students' awareness of morphology. This can be viewed as an innovation, deviating from the routine of teaching and learning morphology in traditional classrooms. It employed two groups of learners, one of which received explicit instructions in learning morphology while the other group received explicit instructions combined with online songs. This paper addresses the following questions:

1. In each group, to what extent do students improve in the three types of morphological awareness, namely, inflection, derivation, and compound words?
2. Which type of morphological development (inflection, derivation and compound words) was acquired first by EFL learners in both groups?
3. Which group demonstrates greater learning gains and retention of morphology?
4. Do the learners in each group exhibit significant differences in learning receptive and productive knowledge of the three types of morphology?

Literature review

As previously noted, morphology refers to a mental system that deals with internal structures of a word and how these structures can be formed (Kirby et al., 2012). One way to investigate morphology is through identifying and discerning morphemes, which refer to the smallest linguistic pieces accompanied by a grammatical function. A morpheme may stand alone as a free morpheme, such as *run* or *read*. A morpheme may also be a meaningful piece of a word that cannot be divided into smaller meaningful parts. For example, *-s* in *students*, signifying the plural forms of *student*. A word may include several morphemes; for example, the word *reorientation* is divided into three morphemes: *re-*, *orient*, and *-ation*. In this word, *orient* is regarded as a stem, which refers to a base morpheme (or a root) that carries the main component of meaning and to which another morphological piece (an affix) can be combined. In the word *reorientation*, *re-* and *-ation* are both affixes that can be attached to the stem. Affixes that appear before the root refer to prefixes, and affixes that appear after the root refer to suffixes.

The acquisition of English morphology is a complex and incremental process (Lessard-Clouston, 2013; Schmitt, 2010), which is mainly formed through inflection, derivation and compounds (Plag, 2003). Inflection refers to formation from adding a grammatical function to a root word; for example, adding *-ed* to indicate the past. Derivation occurs when the meaning of a word is changed by adding an affix to a root; for example, adding *-er* or *-or* to form a noun. Compound words are formed by combining roots; for example, adding *air* to *port* forms a new meaning (airport). The three facets of morphology are the main research focus of the present study. Morphological awareness, in this respect, refers to a metalinguistic understanding of the three facets of morphology and a capacity to build critical reflection, manipulate or

control, then combine and recombine the morphemes (Carlisle, 2003; Kuo & Anderson, 2006).

With regard to the acquisition of the three facets of morphology, Zhang and Koda (2013) suggested that inflectional morphology was the easiest dimension for Chinese EFL students to acquire competence in because most inflected words are regularly structured. In addition, learning compound words is relatively easier because there are also many compound words in Chinese and the acquisition of compounds words is affected by English exposure and Chinese morphological experience. However, derivational morphology is acquired relatively late because it relates to phonological and/or orthographic changes (e.g., determine and determination). In this case, meaning and grammatical category are changed when adding a derivational affix to a stem word. Similar results were found in previous studies (Ku & Anderson, 2003; Tyler & Nagy, 1990).

Researchers have attempted to improve learners' morphological awareness. Several main approaches include: explicit instruction for when and how students should apply strategies in learning morphology (Duke & Pearson, 2002); instructing learners how to apply morphological strategies to figure out the meaning of unknown words they encounter (Bowers & Kirby, 2010; Teng, 2014; Teng & He, 2015); reviewing what has been taught, prompting learners to focus on the strategies, and guiding students toward an independent experience with morphology (Graves, Ruda, Sales, & Baumann, 2012); and learning morphology by combining, composing, and decomposing morphemes (Carlisle, 2010; Carlisle & Fleming, 2003). However, a critical review of this literature reveals that the results for learning morphology were not satisfactory as more than a few learners acquired only partial knowledge. Some learners can recognize morphology receptively but they may still find it difficult to conduct morphology production even after they have received a substantial amount of instruction or language input. Therefore, in considering the difficulties in teaching and learning morphology, it is essential to place emphasis on the affective aspects in the process of word learning. In other words, finding ways to motivate reluctant students to develop morphological awareness through enjoyment is crucial (Blachowicz & Fisher, 2012).

As argued by Foncesa Mora (2000), learning through songs can help learners to memorize because it can leave a deep trace in their memories. In addition, learning through songs is an effective way for enhancing students' positive emotions and motivations (Lems, 2005; Li & Brand, 2009). Related studies, including one conducted by Li and Brand (2009), revealed that Chinese students improved considerably in learning new words after being taught with English songs. Coyle and Gracia (2014) provided evidence that teaching through various song-based activities can yield positive results in developing receptive knowledge of vocabulary for Spanish children. Similar results were also found by Schwarz (2012), whose study showed that learning English songs was effective in acquiring new words. Despite these acknowledged advantages, to date, limited empirical studies have been conducted to measure the effectiveness of songs on learning morphology. In the search for applying online songs to develop morphology for EFL students in classroom settings, Teng (2016a) provided some evidence that online songs have the potential to boost learners' awareness in three facets of morphology: inflection, derivation and compounds. However, in critically reviewing this study, it was discovered that although development of morphology through English online songs was noticed for some EFL students, any positive effects from this might be attributable to participants' natural development as it was a classroom-based study, and learners could have acquired morphology through other means, which cannot be

determined without access to a comparable control group. Therefore, the present study attempts to build on that study (Teng, 2016a) by introducing a control group.

Method

Participants

An original pool of 140 students was reduced to 80 participants based on the results of an initial word level test. They were 56 females and 24 male tertiary-level first-year students who were native speakers of Chinese and had studied English for at least six years. Their ages ranged from 18 to 21 and they were from different majors from the same university in China.

In order to better understand the learners' word level before the study, the original cohort (140 learners) all took Nation and Beglar's (2007) vocabulary size test (VST). The reliability of this test was shown in Beglar's (2010) study, and was positively highlighted in Schmitt (2010) and Lessard-Clouston (2013). Nation (2012) describes the test as "a 14,000 [word] version containing 140 multiple-choice items, with 10 items from each 1,000-word family level. A learner's total score needs to be multiplied by 100 to get their total receptive vocabulary size". The test-taker is directed to pick an answer that is closest to the target word. In the following example, the *b* option has a similar meaning to *period* and therefore, is the correct answer:

Example 1: multiple-choice item:

PERIOD: It was a difficult period
a. question b. time c. thing to do d. book

The mean score of the original 140 participants' vocabulary size is 27.88 (Table 1). There were 25 learners at the 1,000-1,900 word level, 80 learners at the 2,000-2,900 word level, 20 learners at the 3,000-3,900 word level, and 14 above the 4,000-word level. The 80 learners at the 2,000-2,900 word level were invited to participate in the study.

Table 1. Results of VST

	Lower than 10	10-19	20-29	30-39	Above 40
Number of participants	0	25	80	20	15

Note. M=27.88 S.D.=8.09

Group comparison

The 80 participants were divided into two equal groups which had no statistically significant differences in their vocabulary size test ($p = .68$). Participants in the control group received typical explicit instructions in learning morphology which included explicit explanations of morphology usage, and some related exercises (see Figure 1 for typical procedures).

1. The teacher provided explicit instruction on morphology, e.g., the teacher instructed how prefixes and suffixes worked and established categories of words with similar structures through communicative activities with students. For example, for the word disappearance, the teacher explained that dis- is a prefix and that -ance is a suffix with appear as the root word.
2. The students were then instructed to supply the appropriate form of a given word. The teacher provided a sentence; the students needed to supply the form.
For example: His ____ (appear) is being looked into by the police.
3. The students were instructed to think of a synonym, antonym, hyponym or superordinate to each target word. disappearance [antonym] ____ (appearance)
4. The students were encouraged to use target words to create a sentence (for any theme)

Figure 1. Typical procedures used with the control group

Participants in the experimental group received the same instructions as the control group but were also provided with an additional learning activity which involved utilizing online English songs and was based on the website (<http://lyricstraining.com/>). The participants were required to fill in omitted words of the lyrics while listening to songs. This website contains around 4,000 songs, each of which can be used at four different levels: beginner, intermediate, advanced, and expert (Figure 2). This learning tool provides feedback automatically after users finish working on a song, indicating the word to which they should pay particular attention.

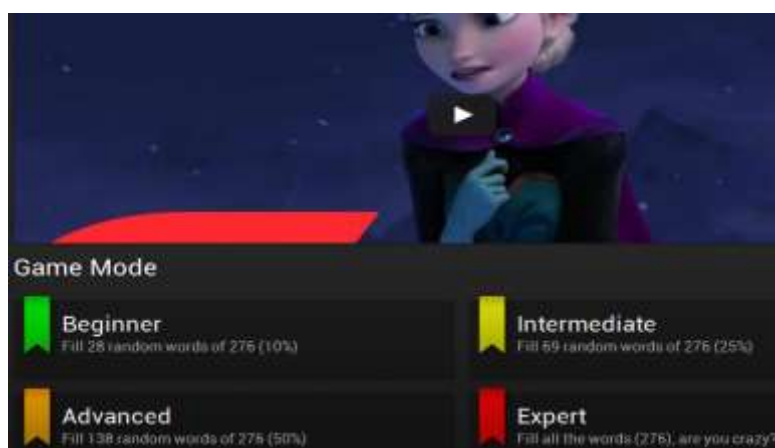


Figure 2. A song with four game modes in the website

The main reason for choosing this learning tool is its suitability for learners at different word levels. For example, the beginner mode is suitable for learners with a 1,000-2,000 word level while intermediate mode is suitable for learners with a 2,000-3,000 word level. Given the word level of participants in the study (as demonstrated in the initial test), they were assigned to work in the intermediate game mode.

Target words

Twenty inflected morphemes (scars, whispered, polished, recognized, disappointed, beats, scared, lied, deceived, stands, dreamed, blankets, distracted, memories, forged, washes, troubles, discovered, praised, ignored), twenty derivational morphemes (alienation, frigidity, unconditionally, breathless, sleeper, walker, enlightenment, keeper, recognition, fighter, dreamer, murder, powerful, player, broken, greener, embarrassment, timer, receiver, cooler), and twenty compound words (snowman, starlight, waterside, heartbeat, sunlight, icefall, flashback, overflow, kingdom, seabirds, hourglass, sweetheart, sunrise, highlight, breakup, floodwater, seaboard, timeline, overuse, workspace) were selected from English songs. The selected words were unknown to the participants as indicated through a vocabulary checklist administered four weeks prior to the study.

Research instruments

Two research instruments, similar to those used by Teng (2016a), were employed to measure the participants' morphological development during the study. Participants took the Controlled Productive Test (CPT) first, then the Word Identification Test (WIT). The two tests were conducted separately to avoid the possibility of cross-test interference.

The Word Identification Test (WIT)

This test was modelled after the *Yes/No* test (Mochida & Harrington, 2006; Stahl & Bravo, 2010) because it was suggested that the *Yes/No* test was more reliable than a multiple-choice test (Huibregtse, Admiraal, & Meara, 2002). Rather than using 40 pseudo-words as distracters, the present WIT includes 40 distracters selected from the words spelled erroneously by the participants. There are two reasons for the difference: First, it is quite difficult to find 40 pseudo-words that follow the lexical patterns of the target words. Second, the purpose of the study was to measure morphological development, and it was deemed appropriate to use misspelled words rather than pseudo-words, because there is a positive correlation between spelling and morphological knowledge (Bowers & Kirby, 2010; Nagy, 2007; Templeton, 2009).

This test includes three sections: inflection, derivation, and compound words. There are 60 correct words and 40 incorrect words (See Appendix I). The test-taker simply circles the correct words.

The Controlled Productive Test (CPT)

The 60 target words in the Word Identification Test were also used in this productive test. The CPT was modelled after the Productive Levels Test (Laufer & Nation, 1999; Nation, 2001). A sufficient number of a few initial letters were provided as a clue for the learners to guess and write down the target word (See Appendix II). An example item is as follows:

Example 2: item from CPT with initial letters provided

I am glad we had this opp_____ to talk. (Opportunity)

Several students with a similar English level were invited to pilot the two tests. Their average time for finishing the two tests was 60 minutes, thus, the study participants were given 60 minutes to complete the tests.

Scoring system

The WIT awards one point for choosing a correct word and zero points for choosing an incorrect word. The total score for this test is 60 points, with an equal 20 points for each of parts I (inflection), II (derivation), and III (compound). The CPT awards one point for writing a correct word and zero points for writing an incorrect word (Nation, 2001). The total score for this test is also 60 points distributed equally across parts I (inflection), II (derivation), and III (compound). An experienced English teacher was invited to score the tests.

Procedures

This study lasted for 16 weeks (one semester) and was conducted during regular class hours. The author was responsible for the teaching. During the 16 weeks, the participants in the control group received two hours a week of explicit instructions in learning morphology (Figure 1). The 60 target words were taught, as well as other words. The participants were not told that they would have a test after this study. The teacher did not highlight the target words.

Participants in the experimental group also studied for two hours a week. They spent the first 8 weeks receiving the same explicit instruction. This included the target words, as well as some other words. For the last 8 weeks, each student was provided with a computer to complete 160 online songs from the intermediate-level game mode, with two lessons for completing 20 songs per week assigned by the teacher. The teacher assigned the songs to the participants. After participants had finished filling the blanks in each song the program automatically provided them with feedback. For example, learners would be informed which words they had produced incorrectly, and which words they needed to pay particular attention to because they had made mistakes. The teacher did not teach during the process of using this learning tool. The 60 target words were from the selected songs. During the entire process, the learners were also not informed of the target words, as well as the tests employed in the study.

The two tests were administered immediately after the study, and also one month after the study. The former test measured learning and the latter measured retention. To avoid problems associated with attempting to create different tests of equal levels of difficulty, the posttests and the delayed tests were identical except the order in which the items were presented.

An interview was conducted at the end of the study to explore the subjects' attitudes toward using online songs. Ten students were randomly selected for interviews which were conducted in Chinese; the author conducted the interviews and translated them into English.

Results

Table 2 provides the total WIT and CPT scores for learners from different groups. This includes overall means and standard deviation for the posttests and delayed tests.

Participants' learning of morphology exhibited in the posttests

Participants' scores on the WIT section at the end of the study revealed that they have acquired certain knowledge of morphology (Table 2). For the participants in the control group, the overall mean score of inflection is 14.5, derivation is 13.2, and compound words is 15.3. For the experimental group, the mean scores of inflection, derivation, and compound words are 16, 16.2, and 18.9 respectively. There were no significant individual variances, as the overall standard deviation is quite low (the highest was 1.9).

However, participants' scores were comparatively lower in the CPT section. For the learners in the control group, the overall mean score for inflection is 7.9, for derivation is 7.2, and for compound words is 3.0. For the experimental group, the mean scores of inflection, derivation, and compound words are 12, 11.1, and 5.9 respectively. There were also no significant individual variances, as the overall standard deviation is low.

Participants' retention of morphology

The results seem to reveal that attrition occurred in retaining knowledge of morphology (Table 2). On the delayed WIT test for the control group, the overall mean score of inflection is 7.9, for derivation, it is 8.8, and for compound words, it is 6.2. However, development in the scores of CPT was less pronounced; the overall mean score of inflection was 2.1, while the overall mean score of compound words was only 1.9. Data collected from the experimental group also showed attrition in the retention of morphology. The overall mean scores of inflection, derivation, and compound words for the WIT are 11.6, 10.4, and 8.8 respectively. The overall mean scores of inflection, derivation, and compound words for the CPT are 3.9, 7.1, and 3.1 respectively.

When probing into these results, there are two issues to be taken into account: First, the results were in the context of the usual standard error of measurement. Second, since the tests were used twice, for both test and retest, part of the improvement might be from familiarity with the tests. Nonetheless, as the data shows, most participants have developed their understanding of morphology.

A one-tailed Wilcoxon signed rank test was used to demonstrate that the differences between the two groups were statistically significant in learning morphology (Table 3). This included the learning and retention of inflection, derivation, and compound words in both the WIT and CPT. These results, therefore, showed an advantage in using online English songs to facilitate morphology learning.

Receptive versus productive knowledge

A review of the data in Table 2 reveals a key reason for the gap between the different types of morphology related to receptive and productive learning. For instance, in the WIT that focused on receptive knowledge, the compound word is the type of morphology that increased the most in morphological development. However, in the CPT that focused on productive ability, the overall mean of compound words was the lowest. Likewise, the mean score of inflection, ranked second in the WIT, and ranked first in the CPT. In addition, the mean score of derivation, which ranked third in the WIT, ranked second in the CPT. This result was consistent in the experimental group. In the meantime, results from the immediate posttests (Table 2) show that about 45 % of inflection, 55 % of derivation, and 80 % of compound words were not known productively by the learners in the control group. About 25 % of inflection, 31 % of derivation, and 70% of compound words were not known productively by the learners in the experimental group. This is not a very positive result, especially in relation to

Table 2. Participants' posttest and delayed tests results (maximum score for each subtest is 20)

		WIT						CPT					
		Inflection		Derivation		Compound		Inflection		Derivation		Compound	
Group	N.	P.T.	D.T.	P.T.	D.T.	P.T.	D.T.	P.T.	D.T.	P.T.	D.T.	P.T.	D.T.
C.G.	40												
M	-	14.5	7.9	13.2	8.8	15.3	6.2	7.9	2.1	7.2	3.9	3.0	1.9
SD	-	1.8	1.6	1.7	1.6	1.9	1.5	1.8	1.3	1.6	1.5	1.7	1.4
E.G.	40												
M	-	16	11.6	16.2	10.4	18.9	8.8	12	3.9	11.1	7.1	5.9	3.1
SD	-	1.8	1.7	1.7	1.5	1.8	1.5	1.4	1.4	1.6	1.3	1.5	1.4

Note. C.G.= control group; E.G.= experimental group; P.T.= posttests; D.T.= delayed tests; N.= number

Table 3. Wilcoxon signed rank test results of comparing the two groups

	WIT						CPT					
	Inflection		Derivation		Compound		Inflection		Derivation		Compound	
Tests	z	p	z	p	z	p	z	p	z	p	z	p
P.T.	-4.41	0.00	-4.32	0.00	-4.41	0.00	-4.41	0.00	-4.41	0.00	-3.05	0.00
D.T.	-3.81	0.00	-3.10	0.00	-3.44	0.00	-3.43	0.00	-3.50	0.00	-3.33	0.00

Note. P.T. = posttests; D.T. = delayed tests.

compound words. Although learners can recognize them, they might find them difficult to produce in a given context. This type of knowledge requires more exposure to the words to be permanently acquired.

Analysis of the interviews

Overall, informal interviews with 10 students showed that learning through English songs is an interesting approach. Almost every student agreed on the importance of learning English songs. For example, when asked about learning morphology through English songs, Su answered:

English song was the force to raise my consciousness about morphology. It was really fun playing with morphology through the song.

Hu added:

I think it was very interesting to learn morphology through English songs, and it helped me develop a consciousness towards morphology, especially the compound words.

Lu also said:

Listening to songs is a great way to learn English. When you are enjoying yourself, you learn without even realizing it, for example, you could see how the structures are formed and used.

In summary, the data revealed the following answers to the research questions:

1. All three dimensions of morphology were improved for learners in each group.
2. Acquiring the receptive knowledge of compound words is the easiest, but it is also the most difficult in terms of acquiring productive knowledge. The mean score of inflection ranked second in the WIT, but ranked first in the CPT. In addition, the mean score of derivation, which ranked third in the WIT, ranked second in the CPT.
3. Concerning the three types of morphology, learners in the experimental group showed significantly greater scores than the learners in the control group.
4. The development in receptive and productive knowledge of morphology is significantly different.

Discussion

First, the process of understanding morphological combinations is a complex one, in which it is difficult for learners to maintain their interest. Thus, using online English songs is an effective method of enticing students to probe into morphological structures.

Second, the findings showed that learners' basic skill of inflection was better learned than derivation, and compounds were better learned than derivation and inflection. This reinforced previous findings (Zhang & Koda, 2011, 2013). However, this result was only restricted to a learners' receptive recognition ability. When examining the productive test, the results were significantly different. The current study shows that, in terms of productive ability, inflection was acquired more easily than derivation, and derivation was acquired more easily than compound words.

Third, measuring learners' receptive and productive knowledge requires further discussion. In the present study, the WIT is viewed as word recognition, measuring the receptive knowledge, while the CPT is viewed as measuring productive knowledge.

While both tests have been adapted successfully for this study, several issues in morphological development should be noticed. There is no natural progression from a receptive to a productive stage; students cannot learn the words productively with limited input over a short period of time. This was also shown in previous studies (Laufer, 2005; Schmitt, 2010). Receptive knowledge is the precursor to productive knowledge, which means that a sound and large knowledge of receptive morphology shed light on the interconnected and dynamic relationships with productive morphology, and ultimately, lead to better production. The findings also espoused that some morphological structures reached a productive level of mastery sooner than others did. For example, the compound words were least well acquired for the productive knowledge in this study. In addition, the process from receptive to productive knowledge is multi-faceted, for which some knowledge follows a developmental pattern, but other knowledge may be less linear.

Some limitations must be recognized in interpreting these results. First, the results were in the context of the usual standard error of measurement, and test-retest interference might occur, thus part of the improvement might be due to familiarity with the tests. Second, this is a case study, and as such, it represents morphological development in one context. These findings may, therefore, not be representative in other contexts. Third, only Chinese students participated in this study, limiting the potential for generalization of the results to other groups of learners. It is also a possible limitation that any positive effect of this experiment might be attributable to natural development of participants, because the nature of this study was a classroom-based study. Finally, as for the findings regarding compound words, it seems possible that the large gap between receptive and productive knowledge is not necessarily a reflection of receptive knowledge exceeding productive knowledge to that extent, but perhaps a reflection of the participants' abilities to infer meanings of compound words. Since many compound words do not have meanings that significantly differ from their components, this may be a threat to the validity of the measure of receptive knowledge of compound words in the study. However, these limitations do not negate the purpose of the study, which is to measure morphological developments through using computer-based online English songs.

Conclusion

This study measured the relative effectiveness of applying online songs for morphology acquisition through an experimental approach, for which an experimental group and control group were employed. Corroborating previous findings (Li & Brand, 2009; Teng, 2016a), the results of the present study provided evidence that learning through English songs is an effective approach and a valuable resource for teaching and learning morphology for Chinese EFL students. Two main findings are that Chinese EFL students who were exposed to the learning condition with online songs outperformed those who were not; and learning through songs can enhance learners' motivation and focus their attention and interest on learning morphology. However, learning through online English songs still has its drawbacks; for example, students have limited opportunities to practice their productive knowledge. Therefore, further work is needed to consolidate the productive knowledge of morphology, as well as their retention ability. This may be realized by combining explicit instructions for learning morphology with online English songs whereby students are provided with more opportunities to practice and memorize the productive knowledge of morphology.

Since the present study utilized online songs for Chinese EFL students, future studies could be conducted with a focus on measuring its effectiveness for other students, representative of different learning contexts or settings. In addition, since the focus of this study was on morphological awareness, future research may examine the effectiveness of online English songs on learning other language skills, for example, speaking and listening. Given the ambiguous results from Teng (2016a), and the fact that previous empirical studies had not touched upon the issue of morphological awareness through songs, it is believed that the present study contributes to this field through an experimental approach to measuring the efficacy of using online English songs for Chinese students' development of morphology.

About the author

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Appendix I

Word identification test

Directions: Below you see a list of words. Put a circle around the correct words. There are 60 correct words and 40 incorrect words.

Part I

scars	whispered	meand	trueth	wonderred	polished
securitise	recognized	disappointed	imagnines	wonderring	beats
scared	lied	deceived	stands	dreamed	believeing
blankets	distracted	memories	compairs	existenses	bellowes
forged	polishes	washes	troubles	discovered	praised
blanketes	reconized	ignored			

Part II

alienation	hustlar	frigidity	unconditionally	breathless	dreamor
sleeper	walker	illutionary	enlightenment	lier	keeper
recognition	fighter	comitmant	fascinacian	keepor	dreamer
funy	modernies	happinese	emtiness	murder	powerful
player	broken	greener	embarrassment	timer	receiver
cooler	suny	lonelinesse			

Part III

overdeu	snowman	starlight	waterside	heartbeat	sunlight
icefall	stearcase	flashback	outskert	overflow	kingdom
seabirds	hourglass	sweetheart	osceanshore	rainbou	sunrise
highlight	Soreline	breakup	sanstone	crystleline	linegray
floodwater	lanbase	sangrane	seaboard	timeline	flightcrue
overuse	benthmark	workspace	downgreat		

Appendix II

Controlled productive test

Directions: Please pay attention to the form and complete the underlined words. An example is as follows:

I am glad we had this opp_____ to talk. (Opportunity)

Part I

1. The doctor says that all the sc_____ on his face will fade in time.
2. Two men whis_____ secretly in the corner even the policeman approached them.
3. It is an honest book but it hasn't been pol_____.
4. I immediately reco_____ him when I saw him again.
5. He was quite disa_____ at her failure.
6. My heart be_____ as he is coming here.
7. I was so sca_____ when I heard the noise made by the rats.
8. She l_____ to me, she never tell me the truth.
9. His friendly smile de_____ us.
10. She st_____ up when the teacher arrives.
11. I dre_____ of becoming a teacher when I was young.
12. The people in the earthquake area need a lot of blan_____.
13. Sam is always dist_____ in class.
14. All my mem_____ are all about her.
15. The ship for_____ ahead with a favorable wind.
16. She always wa_____ her hands before eating.
17. All tro_____ were caused by his carelessness.
18. He dis_____ this secret by accident.
19. Mother pra_____ the little boy because he could admit his fault.
20. She just ig_____ me when she passed by.

Part II

21. A sense of ali____ followed me through my first year.
22. She was not comfortable with the fri____ of this department.
23. He accepts all the order from his boss uncon____.
24. David was brea____ with excitement.
25. On the train back home, there were only my wife and I in the sle____ compartment.
26. She first used a cane, then a wa____.
27. A child can only arrive at enligh____ slowly.
28. He works as a gate-ke____.
29. The little boy really wants his father's reco____.
30. I am a figh____, not a coward.
31. He is really a day-dr____, he always wants to be a millionaire.
32. He was put into prison for attempting mur____.
33. He is really pow____, he can control everything.
34. He was hurt in the match, so another pl____ replaced him.
35. His legs were bro____ in the match.
36. The grass looks gre____ on the other side to this side.
37. It's really an emba____ for a poor guy to participate such a luxurious party.
38. When the ti____ starts, it will automatically calculate the time.
39. Gratitude is double happiness; it blesses both giver and rec____.
40. Thanks for the air-conditioner, it makes the temperature co____.

Part III

41. The snowm____ will melt after the sun comes out.
42. I enjoy the view of the harbor in the star____.
43. Two little bears are idling along the water____.
44. Can you feel my heart____.
45. We can see the dust floating in the sun____ clearly.
46. It is terrifying to take photo on the icef____.
47. In flashb____, he sees the murder in reverse.
48. It has rained for three days, the river finally over____ its banks.
49. Do you want to live in my king____.
50. A lot of seab____ are flying around the beach.
51. Her hour____ shaper is quite sexy.
52. She was David's childhood swee____.
53. It is very romantic to see the sun____ in the morning.
54. The book high____ the importance of seeking freedom.
55. The break____ of their marriage is a natural thing to everybody.
56. The soldiers tried to keep flood____ away from villages.
57. It is time to raise income for the workers, especially on the developed seab____.
58. Are you always holding yourself to a reasonable timel____?
59. You will be punished if you over____ your power.
60. Sam always decorates his works____ with drawings.