

“The Song of Words” Teaching Multi-Word Units with Songs

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ABSTRACT

The need to integrate songs into English Language Teaching (ELT) has been recognized on numerous occasions. Song lyrics host multi-word units which learners can reuse as building blocks in their English, thereby reducing language processing time and effort, and improving their fluency as well as idiomaticity, thus bringing them closer to the native speaker norm. We report on two studies into the effectiveness of using songs for teaching multi-word units to high-school Polish learners of English. The same items were taught to two groups of EFL learners, but only one of the groups heard them in a song. Learners' vocabulary recall was measured at three points in time relative to the teaching: before, immediately after, and a week after. The group taught with songs showed a significant recall advantage over the other group, especially when tested a week from teaching. The results suggest that songs can be an effective vehicle for teaching English multi-word units.

Keywords: song; English; vocabulary learning; multi-word units; formulaic language; positive psychology

INTRODUCTION

The naïve view of language is that language, at a basic level, consists of words as building blocks, and grammar as the set of rules to join words together. This view is conserved in the socially salient cultural artefacts: dictionaries (as collections of words) and grammar books (as collections of rules for combining single words into longer chunks). The same view is also prominent in linguistic models of language (notably in the generative view) and — more relevant for the present contribution — in foreign language pedagogy, much of which still subscribes to the ‘slot-and-filler’ view of language. For example, a typical language textbook of today will still feature glossaries with simplistic vocabulary lists, alongside grammar modules.

In all fairness, phrases and expressions such as ‘how are you’ (with a pragmatic function) or ‘by the way’ (with a discourse-organizing function) are also found in English textbooks, but what will surely be missed is that these multi-word units are not at all isolated exceptions, but rather they represent the fundamental way in which natural language works: a realization that was aptly and memorably expressed by John Sinclair in what became known as the ‘idiom principle’:

The principle of idiom is that a language user has available to him a large number of semi-preconstructed phrases that constitute single choices, even though they might appear to be analysable into segments.

(Sinclair, 1991, p. 110)

John Sinclair’s work did much to redress the bias of many decades towards the complementary ‘open-choice principle’, which saw language as being constructed of largely interchangeable building blocks in the form of words, which would fill in the slots produced

as final nodes of a syntactic structure. This view of language is also known as the ‘slot-and-filler’ model, wherein words are glued together with grammar. One could argue that the view of single words as the building blocks of language, with grammar as ‘assembly instructions’ owes much to the naïve view of language, which is in turn strengthened through exposure — also through education — to cultural artefacts of grammar books and dictionaries. In this vein, Hudson (1988) argues that the salience of the distinction between grammar books and dictionaries might be the reason that “so many theoretical linguists are convinced that human language has a similar organization: it consists of a set of rules plus a lexicon” (p. 287); that is the case because linguists, like all educated citizens, “have dictionaries on [their] shelves, and have grown up in a society where dictionaries are standard items of furniture” (p. 287). More pertinently for the present study, it is not just the view of language as being fundamentally split into the grammar and the lexicon that has “infected” (Hudson, 1988, p. 288) the minds of professional linguists — such as the generativists — but it is equally true of the view of how the putative mental lexicon might be organized. Thus, in Hudson’s (1988, p. 288) words, “the fact that the lexicon is generally assumed to consist of a list of discrete lexical entries could well be related to the fact that commercial dictionaries consist of a list of entries, each treated as a separate ‘paragraph’”. This, we believe, is an important reason behind the general failure, on the part of linguists (including many applied linguists) — for many decades — to see multi-word units for what they really are: fundamental elements of language in their own right.

Multi-word units are described as multi-word, conventional and frequent, varying in length, and straddling lexicon and syntax. Amid other areas, the significance of multi-words has been reflected in social interaction (where fixed phrases are central to the realization of speech acts such as greeting, requesting, complimenting, inviting, refusing) and second language acquisition (where pre-packaged routines help learners communicate in the foreign language with the external world).

While some multi-word units recur unchanged (e.g. *by and large*), others allow for a degree of variation (e.g. *to get/catch/attract/hold/have someone’s attention*). This cline from stable (fixed) to lexically variable (non-fixed) lexical constructions has become one of the criteria for classifying them into types and subtypes. How lexical phrases are defined, classified, and processed will be the topics of the first part of this contribution. The second part will argue that songs, being rich in multi-word units, lend themselves well as a teaching tool in the ELT environment. The third part of our paper reports on two empirical studies conducted to verify the effectiveness of teaching multi-word units through songs to EFL learners.

MULTI-WORD UNITS

TWO APPROACHES TO MULTI-WORD UNITS

The study of lexical word combinations, traditionally called *phraseology*, goes back to at least the early 20th century (Bally, 1909). Apart from France, early study of phraseology flourished in Russia, particularly in works by Vinogradov (Виноградов, 1947). The French and Eastern European approaches to phraseology placed great emphasis on the notions of fixedness and opaqueness. It is these approaches that are believed (Granger & Paquot, 2008) to have shaped Cowie’s work, which became quite influential in the West (Cowie, 1981, 1988, 2001). This view of phraseology has tended to focus on combinations that are relatively fixed and opaque, to the exclusion of the so-called free-combinations.

A radically different approach is that rooted in modern corpus linguistics (Sinclair, 1987), which is inductive in nature and based on the frequency of co-occurrence. This approach is far more inclusive, letting in lexical combinations that were considered to fall outside the limits of phraseology in its more restrictive sense. The Sinclairian approach to language gives word combinations a central place, above that of the single word (the ‘idiom principle’: see above).

It is this broader approach that is taken in this study, and we adopt the term multi-word units (or MWU’s) to include all kinds of word combinations, chosen out of a multitude of alternative terms that have featured in the extensive literature (some of the better-known being: multi-word expressions, multi-word items, multi-words, lexical(ized) phrases, prefabricated routines, prefabs, formulaic sequences/language, idioms, fixed expressions, lexical chunks, lexicalized sentence stems, pre-packaged building blocks, pre-constructed phrases, conventionalized forms, ready-made/set expressions, phrasemes). Following John Sinclair, we take the view that multi-word units are a staple of everyday verbal communication. On this view, MWU’s are identified as those combinations of words that are frequent in language (as objectively identified via corpus study). This distributional criterion stands in contrast to the syntactico-semantic criteria of the Eastern European phraseological tradition. This is not to say that in the Sinclairian approach meaning is ignored. Rather, it is now associated with observable patterns, and is spread across multi-words (via notions such as *semantic prosody*).

CATEGORIZING MULTI-WORD UNITS

Multi-word units come in many types, and how exactly they are classified depends on the broad tradition (see above) as well as the specific classification criterion applied. This may focus either on the form, function, semantic irregularity, syntactic irregularity, the degree of fixedness, or — on the distributional approach — word frequency. A useful overview of the criteria is offered in Wray and Perkins (2000, pp. 4-9). As the same authors (2000, pp. 2-3) rightly observed, accounts of the existence of formulaic language largely depend on the researchers’ point of departure in investigating the phenomenon. For instance, this may vary depending on the type of a target population they deal with: adult native speakers, native language (L1) learners, foreign (FL) or second language (L2) learners, or aphasics. The initial lack of cross-referencing against the reports investigating the same phenomenon from various perspectives left a legacy of over 40 terms that have been used to refer to one type of formulaic language or another. Below, for reasons of space, we only give a taste of the existing typologies.

Becker (1975, pp. 61-62) puts forward a basic form-based taxonomy of formulaic sequences in adult native language, which recognizes seven sub-types of multi-word units (polywords, e.g. *for good*), phrasal constraints (e.g. *by sheer coincidence*), meta-messages (e.g. *for that matter*), sentence builders (e.g. *(person A) gave (person B) a song and dance about (a topic)*), situational utterances (e.g. *how can I ever repay you?*), and verbatim texts (e.g. *better late than never*).

With more focus on learners of English, Nattinger and DeCarrico (1992, pp. 60-66) propose a detailed typology of English multi-words based on their pragmatic function. In this system, multi-word units might, for example, be classified as discourse devices (e.g. *for good, for that matter, in other words, my point is that X*), social interactions (e.g. *how can I ever repay you?, I am sorry to hear about X*), or ‘necessary topics’ (e.g. *my name is __, a __ ago*).

One motivation behind efforts to classify multi-word units is practical: to provide a convenient framework for the compilation of lexical reference works, primarily dictionaries,

including those aimed at language learners. In this vein, Cowie's phraseological continuum (Cowie, 1981) has remained influential. A more recent typology so motivated is Bergenholtz and Gouws (2013), listing no less than twenty different types of MWU's.

Of the recent attempts at bringing order into the complex universe (or should we say multiverse?) of multi-word units, Granger and Paquot (2008) may be the most compelling. The authors group MWU's (using *phrasemes* as the umbrella term) into three broad functional groups: referential, textual, and communicative. The referential group includes: (Lexical) collocations, Idioms, Irreversible bi- and trinomials, Similes, Compounds, Phrasal verbs, Grammatical collocations. The textual group comprises: Complex prepositions, Complex conjunctions, Linking adverbials, and Textual sentence stems. The last broad class of communicative phrases includes: Speech act formulae, Attitudinal formulae, Proverbs and proverb fragments, Commonplaces, Slogans, Idiomatic sentences, Quotations. In terms of this last classification, the twenty-six items in our study (see the section titled **Research tools and materials** below) would include twelve Lexical collocations, seven Idioms, three Phrasal verbs, and one each of: Grammatical collocations, Commonplaces, Proverbs and proverb fragments, and Textual sentence stems.

WHY FOCUS ON MULTI-WORD UNITS?

The nature of multi-word units holds implication for comprehension and production in one's L1 and FL/L2. In the L1 learning context, researchers first point to children's linguistic behaviour. As Peters (1983, pp. 1-2) writes, single words may not always comprise the fundamental units that very young children parse and acquire. Mainly exposed to streams of spoken language, where 'breaks' that mark word boundaries are fewer and less salient than in written texts, children tend to fish out multi-word units, store them as wholes, and retrieve as such. This reveals their inability to break up what they hear into separate words, but, at the same time, shows that they, knowingly or otherwise, rely on some resource-saving strategy to function in the world of adults, and employ it throughout to handle multi-word units that they frequently hear in adult speech.

Do adults use a comparable sort of 'a short-cutting device' to process long strings of language? It seems that they do, and the relevant research consistently vindicates Sinclair's *idiom principle*, discussed in the Introduction. Peters (1983, p. 86) notes that there is "an imbalance between memory capacity and processing speed in human brain". A proposed explanation for this is that adults, in parallel to children, handle language in pre-assembled chunks rather than single words. High-frequency multi-words are memorized as one unit, stored as one unit, and retrieved as such. This, in turn, as Nation (2001, pp. 320-321, 336) points out, reduces the time needed for language recognition and production, and promotes fluency. Multiple lexical storage with complex inter-item connections makes access to the lexicon easier and faster, as the user's language is not reconstructed from scratch each time a sentence is produced or heard. This assumption has been corroborated by experimental results from reaction time (self-paced reading) and eye-tracking studies on L1 and L2 processing in adults, showing that in their native and non-native language they (1) read formulaic expressions (e.g. *hit the nail on the head*) faster than expressions with the same content words but embedded in a non-idiomatic phrase (e.g. *hit his head on the nail*) (e.g. Conklin & Schmitt, 2008); and (2) focus their gaze less on a word of interest (e.g. *air*) when it is presented in formulaic sequences (e.g. *it was like a breath of fresh air*) than in a non-formulaic context (e.g. *they love being out in the clean air*) (e.g. Underwood, Schmitt, & Galpin, 2004).

The benefits of storing high-frequency items as chunks go beyond economising on processing time: language processing effort in communication is reduced for the speaker and

listener alike. Handling larger units of language at once allows them to concentrate on bigger chunks of discourse (Nation, 2001, p. 336) and social aspects of communication: they may pay attention to the whole discourse organization, instead of focusing on the syntactic relationships that occur between particular words (Peters, 1983, p. 86).

Another advantage of storing chunks emerges in the FL/L2 context: using them results in native-like selection (Nation, 2001, p. 317; Pawley & Syder, 1983, p. 191). As Nattinger (1988, pp. 75-77) writes, by memorizing fixed collocated patterns, learners form expectations about lexical restrictions of the particular components of phrases and their usage. When more aware of certain constraints and registers in language, learners are far more likely to produce correct and more native-like output. In fact, “[l]exical phrases are a feature of language use which should be brought more into the centre of vocabulary teaching and learning. They provide raw material for subsequent analysis, presenting the learner with the opportunity of fluent production with less risk of producing deviant language (...).” (Carter & McCarthy, 1988, p. 82)

To sum up, multi-word units allow for language processing that is faster, less effortful, more fluent, and more native-like. Given these gains, we postulate, in keeping with other authors, that multi-word units are worth teaching in the FL/L2 classroom environment. In the next section, we go a step further and introduce songs as a vehicle for teaching a foreign language.

WHY TEACH A FOREIGN LANGUAGE THROUGH SONGS?

Songs combine at least two principles: ubiquity and simplicity. Their high accessibility, universality, repetitiveness, and memorability make songs a catalyst for language learning, and an asset in FL teaching (cf. Siek-Piskozub, 1998). First, songs are widely and readily available. Second, songs are easily memorisable. People tend to recall phrases and even complete lyrics or advertising jingles that they have never made any conscious effort to memorize. Singing or simply listening to a song simultaneously engages learners through multiple modes (verbal and nonverbal). It activates both hemispheres, and thereby maximizes our learning potential (cf. Nambiar, 1993). Third, songs have a repetitive nature, which provides learners with ample opportunities for practising and learning new vocabulary and grammar structures. Fourth, songs deal with the realm of daily human experience and emotions. Fifth, songs attract attention. Songs may be appreciated by people who happen to be tone-deaf, or by those whose FL competence is too low to allow them to understand the lyrics, although a recent corpus-based study demonstrates that the lexical coverage of English-language song lyrics is appropriate even for beginners (Tegge, 2017). Notwithstanding their lack of FL proficiency, they enjoy listening to FL songs (often, songs become their major source of FL exposure outside the classroom). The arguments speaking in favour of teaching a foreign language through songs have affective, cognitive, linguistic and didactic underpinnings. Table 1. below presents the reasons that are most often raised by FL researchers (e.g. Lo & Li, 1998; Nambiar, 1993; Schoepp, 2001; Siek-Piskozub, 1998).

TABLE 1. An overview of the reasons for teaching a foreign language (FL) through songs, as given by FL researchers

Affective	Cognitive	Linguistic	Didactic
breaking the routine	automatizing the language development process	serving as a wealth of various linguistically valuable expressions (synonyms, antonyms, idioms, etc.)	developing phonological aspects of linguistic competence (sound discrimination, recognition of word boundaries in connected speech)

Affective	Cognitive	Linguistic	Didactic
enhancing learners' motivation and interests	familiarizing learners with the FL culture and viewpoints	exposing learners to target language syntax, grammar structures, adjectives, adverbs, sentence patterns, rhythms	improving the integration of learners' four language skills
(re)shaping learners' attitudes towards a FL and their beliefs about themselves as FL learners creating a non-threatening atmosphere and easing the tension helping social integration	improving learners' memory span	exposing learners to a sample of genuine and informal language developing an image of a more flexible and true-to-life foreign language	involving the whole class (singing simultaneously) and allowing for maximum participation of each learner being easy to organize for a teacher

It appears that using songs as a teaching vehicle may bring along many positive gains for both learners and teachers. Particularly noteworthy is songs' capacity to ease the tension created in the formal classroom environment, given that anxiety, stress, and lack of self-confidence may cause insurmountable obstacles in FL learning and teaching. When negative emotions increase in learners, or, in other words, when the affective filter is raised, the amount of comprehensible input received by learners is reduced (Krashen, 1985). As a result, they acquire less language. For acquisition to take place optimally, "the acquirer needs to be 'open' to the input" (Krashen, 1985, p. 3), and needs to have a positive attitude to the process of FL learning. As a matter of fact, foregrounding the role of affective and attitudinal aspects of the FL learning situation along with positive psychological well-being strikes a common chord with the key assumptions of positive psychology, application of which to FL study context helps to reflect on FL/SLA research findings so far (cf. Fonseca-Mora & Machancoses, 2016; MacIntyre & Mercer, 2014). Positive psychology emphasizes the importance of enjoyment in life. In this vein, positive affect associated with music appreciation is hypothesized to be an important factor conducive to vocabulary retention (Vural, 2018). Indeed, using songs in the FL classroom does not only promote positive emotions and positive attitudes in learners (Siek-Piskozub, 2016), but also acknowledges a participant-active approach in language learning. Providing a non-threatening classroom atmosphere conducive to language learning and a learner's active engagement in the FL learning seems then essential.

There is an important cognitive rationale for teaching a foreign language through songs: songs may help learners to automatize their language development process. Schoepp (2001) explains that thanks to their repetitive and consistent nature, songs serve as a very good point of departure for creative language production. When provided with ample opportunities for learning a phrase or collocation, or an aspect of grammar (e.g. present progressive tense), learners develop automaticity, and become more ready for creative practice. In a similar vein, Fonseca-Mora (2000, p. 150) points to the potential of melody for creating particularly strong memory traces. A study of 5-to-6-year-olds (Coyle & Gómez Gracia, 2014) demonstrates significant and robust vocabulary gains from repeated exposure to a familiar children's song. A familiar tune appears to act as a powerful mnemonic device even when words are presented as a string without an accompanying syntactic structure (Tamminen, Rastle, Darby, Lucas, & Williamson, 2017). Interestingly, according to a major study (De Groot & Smedinga, 2014), exposure to background music with lyrics does not interfere with long-term vocabulary retention resulting from deliberate word pair memorization.

There are also linguistic reasons for using songs in the FL classroom. In general, lyrics are full of linguistically valuable expressions. They expose learners to a variety of sentence

patterns, grammar structures, synonyms, antonyms, idiomatic phrases, adjectives, adverbs (Lo & Li, 1998, p. 8) that may become more easily associated with the correct meaning and appropriate use, as learners remember the song along with its message. Rukholm, Helms-Park, Odgaard, and Smyth (2018) point to subvocal rehearsal as a likely positive factor in the efficiency of song lyrics in learning FL vocabulary. Their study using Italian songs also suggests that adding high-elaboration activities further improves the effectiveness of songs for both receptive and productive vocabulary learning. Similar conclusions are drawn in a study of folk songs in EFL vocabulary teaching (Yarmakeev, Pimenova, Abdrafikova, & Syunina, 2016), whereby the natural repetition of words and phrases occurring in songs is leveraged towards better vocabulary acquisition.

Many FL teachers see songs as an instrument for achieving various didactic goals. As Nambiar (1993, p. 336) notes, using songs has an organization function as it “permit[s] maximum participation of students in that the whole class can sing simultaneously.” This gives every learner a chance to practise their FL, and a teacher a possibility to control the class with more ease.

There are numerous papers and workbooks designed for FL teachers presenting ideas and techniques for using songs in the FL setting (e.g. Ludke, 2009). At least one educational game has been developed for teaching and learning vocabulary by listening to songs (Kitichaiwat, Thongsuk, & Ngamsuriyaraj, 2014), and computer-assisted FL/L2 learning software that, among other features and formula, helps to efficiently and quickly prepare gap-fill lyrics along with elaboration exercises (the so-called “formulaic cloze passages”) for song-based lessons (see Cobb, 2018).

PREVIOUS RESEARCH AND THEORETICAL FRAMEWORK

To date, a scarce number of empirical studies set out to verify whether songs overall are as worthwhile a tool in academic FL learning as popular conviction has it. Those empirical attempts vary widely in specific objectives, research questions and hypotheses, study designs, materials (target items along with elaboration activities), methods of testing item retention, forms of memory retrieval (recognition vs. recall), and age groups. Studies that have investigated the effects of selected auditory methods for vocabulary retention in children point to an advantage of listening to songs over spoken dialogues on delayed cued recognition test and cued recall test (e.g. Hahn, 1972). Empirical research focusing on adult FL/L2 learners (university students), along similar lines, has produced results where learners’ performance places songs over other auditory learning methods. Adult learners of Spanish achieved significantly higher scores on immediate cued recall test (cloze test) when taught with songs than with the same lyrics recorded as speech (Smith Salcedo, 2010). Interestingly, no comparable effects of songs were found on delayed post-testing, hence not lending support to the intuitive conviction that song-oriented lessons are effective for long-term retention of vocabulary items.

However, the number of studies that have ventured to empirically evaluate the effectiveness of songs for teaching FL multi-word units is still limited. Multi-word units, especially when viewed from the broader, Sinclairian approach to language and meaning, appear to be very well-suited for song-based lesson modules, as very often artists create their songs in such a way that meaningful word combinations (multi-word units) overlap with musical units, and thereby receive additional ‘chunking’ reinforcement. Those available draw either on experimental paradigms implemented in controlled laboratory settings, or on more natural quasi-experimental set-ups. In a laboratory experiment conducted by Ludke, Ferreira, and Overy (2014), twenty matched English (L1)-Hungarian (unknown FL) phrases

(e.g. *You're welcome, Could you repeat that, please?*) were presented to three groups of university students, each tested in one of three conditions: sung, spoken, and spoken with highlighted rhythm. Across all the conditions the same 'listen-and-repeat' presentation method was used. As expected, the song group outperformed two other groups on the immediate post-test (cued production) and the delayed post-test (conversation). A higher knowledge gain in vocabulary phrases in the song condition (compared to prose text format) was also observed by Tegge (2015). In her intervention study, adolescent and adult students based in Serbia, Belgium, and Germany taught in a song-based lesson obtained significantly higher (cued) recall of verbatim text (e.g. *leave no stone unturned, that first step you take is the longest stride*), both in immediate post-tests (cloze-version) and one-week delayed post-test (cloze-version), compared to the prose group.

Presenting vocabulary in a song format simultaneously utilizes those characteristics of songs and language that aid verbal encoding, storage, and retrieval. Of great significance here is chunking, that is the process of grouping individual items into larger meaningful units. Overall, the chunking mechanism (Miller, 1956), although not boosting the number of (subjectively) meaningful units temporarily stored in the short-term memory (STM), allows individuals to maintain and manipulate longer strings of information. This appears to converge with the 'idiom principle' (Sinclair, 1991). In the context of FL vocabulary acquisition, words in the input are chunked into longer strings of words (collocations, idioms, etc.) encoded, retained, and eventually retrieved from the long-term memory (LTM) as one unit. As mentioned earlier, a sufficient number of such pre-assembled lexical units at hand feeds into more native-like fluency and native-like selection (Nation, 2001; Pawley & Syder, 1983). Clustering several smaller units into larger chunks decreases the load exerted on STM. Drawing learners' attention to various multi-word units in FL classes encourages noticing fixed language chunks in the input and promotes learning a lexical chunk as a whole. The concept of chunking also applies to music. In truth, there are parallels between linguistic units (e.g. clauses, phrases) and grouping units found in song melodies (e.g. sub-phrases, phrases) (Arbib, 2013). Such structural correspondence found in lyrics and melody facilitates clustering a string of words into a meaningful segment (very often a multi-word expression), and eases its subsequent retrieval.

Exploring immediate and delayed recall of vocabulary (regardless of the modality or lexicogrammar areas tested) requires adopting a theoretical framework that would help to anchor verbal learning, memory processes and storage. Very successful in accommodating existing evidence is the multi-component approach, where the concept of working memory embraces short-term memory along with other related STM processes. The multi-component model of working memory (WM) (Baddeley, 2000) comprises four components (Baddeley, 2000, p. 418): (1) the central executive — an attentional control system supervising and controlling other components; (2) the phonological loop — engaged in retention of acoustic information over short periods of time (composed of a temporary phonological store and an articulatory rehearsal system); (3) the visuo-spatial sketchpad — holding visuo-spatial information; and (4) the episodic buffer — a temporary storage system of limited capacity, capable of holding complex representations and integrating information from multiple sources. Baddeley's (2000) multi-component model has afforded a slew of experimental studies that tested the phonological loop, as it plays a vital role in learning new vocabulary items. The phonological loop stores and — to prevent decay of representations (traces) in its phonological store — rehearses (and refreshes) ordered speech-based memory representations (traces) before committing them to long term memory (LTM), where the episodic buffer integrates them with information from other WM components. The episodic buffer — multimodal by nature — stores information in a multi-dimensional code, retains new

associative links between items, clusters items into larger chunks, and commits information into and retrieves it from episodic LTM.

Cowan and Chen (2009) address the question of how lexical chunks (MWU's) form in LTM and affect STM limits. As information can either be attended to or neglected, the authors integrate STM and LTM systems with attention, highlighting the role of the focus of attention in their model. The focus of attention is an activated portion of LTM, typically limited to 3-5 chunks of information at a time (in adults) that is critical for forming new associations, and that allows "items that are represented concurrently to be bound into new structures (i.e. multi-item chunks)." (Cowan & Chen, 2009, p. 103). As Chen and Cowan (2009, p. 834) explain, "[v]erbal recall may (...) require an attention-based mechanism that holds the lexical and/or semantic memory and supplements automatic phonological rehearsal, which in turn helps in the retention of serial order."

Separate yet interdependent on semantic memory, episodic memory (Baddeley, 2001; Wilson & Baddeley, 1988), a type of long-term memory for events, stores more contextualized, specific, and unique experiences from one's past. It allows people to form, hold, and update multimodal and multi-sensory representations (see also Tulving, 1972), where the stored details (e.g. sound, colour, feelings, etc.) serve as information retrieval cues.

In the next section, we report on a study where we employed songs to teach multi-word units to EFL Polish learners.

TEACHING MULTI-WORD UNITS WITH SONGS: TWO STUDIES

The present section reports on two studies that investigated whether teaching prefabs through songs to EFL students is effective. The effectiveness of a technique is here operationalized as the students' ability to correctly recall lexical phrases that were taught in class. To evaluate how effective the song technique was, we compared the performance of two groups of EFL learners at an intermediate level of English, where only one group was taught with songs. For clarity, we shall henceforth refer to this group as 'the Song group', and the other group 'the control group'.

RESEARCH QUESTIONS

The study aimed to address two specific research questions related to the comparison of the effectiveness of the song technique relative to time:

1. Will the Song group recall more multi-word units than the control group immediately after teaching? (immediate post-test)
2. Will the Song group recall more multi-word units than the control group a week after teaching has taken place? (delayed post-test)

PARTICIPANTS

In total, thirty-one high-school Polish learners of English at an intermediate-level participated in two studies (Mean age = 18). They attended high-school English language classes offered twice a week. They reported to have been exposed to English from 5 to 15 years (Mean = 9 years).

Two groups were formed and tested for their knowledge of English multi-word units that were to be taught: a pre-test administered two weeks prior to the study revealed that there was no significant difference ($p > 0.05$) between the two groups in this respect. The groups were also comparable in terms of learners' musical predispositions, language learning skills

and attitudes towards English, which we evaluated with a self-designed background questionnaire ($p > 0.05$).

For reasons independent of the researchers, not all participants were involved in each study (Study 1: 12 learners in each group; Study 2: 14 learners in each group).

RESEARCH TOOLS AND MATERIALS

A questionnaire designed to evaluate learners' musical predispositions, language learning skills, and attitudes towards learning English comprised 16 four-point Likert-scale questions.

To measure learners' knowledge of target multi-words, we used a 13-item test, where they were requested to provide English equivalents of the Polish phrases. The tested English items were between two and four words in length. See [Supplementary Material](#) for a complete list of test items.

The same test was administered at three different stages of the study: prior to the test, immediately after teaching has taken place, and one week from teaching. We will henceforth refer to them as pre-test, immediate post-test, and delayed post-test, respectively.

Since participants were tested on multi-word items, a degree of variability was to be expected in their translations. While some of the provided English equivalents might have exactly matched the prefabs taught in class, others might have shown types of errors of a different nature. To establish some common ground here, we adopted uniform criteria for evaluating the degree of accuracy for each item. In the process of evaluation, each translation provided by each learner was rated on a 3-point scale. The assessment criteria are given below:

- 0 points: the meaning is not rendered and there is no evidence of lexical items from the target expression; e.g. *hang up the phone* is translated as “hold down”,
- 1 point: the meaning is not precisely rendered, i.e. is too broad or too narrow; OR the meaning is partially rendered and one misspelling is present; OR one word is changed in the target expression, but the word combination is still possible; e.g. *make it home* as “reach one's goal”,
- 2 points: the meaning is rendered correctly, but there is one misspelling; OR a grammatical error: problem with an article OR with subject-verb agreement; e.g. *if there's some emergency* as “if there's emergency”,
- 3 points (exactly as it was taught).

The criteria above were employed consistently to provide an unbiased and fair evaluation of learners' test performance.

The teaching materials comprised two songs, one for each of the two Studies: Stevie Wonder's “Part-time lover” (Study 1) and a modified version of Jamie Cullen's “Twentysomething” (Study 2), along with two sets of short audio-recorded sentences that matched the songs in terms of the tested multi-word items. The sentences were recorded by a native speaker of English specifically for this research. Working with lyrics or sentences took the form of a regular EFL listening comprehension practice, where students were instructed to fill in the gaps (see [Supplementary Material](#)). For this purpose, the very same phrases were removed from the lyrics and from the sentences.

PROCEDURE AND STUDY DESIGN

Each study had a three-stage structure: a standard pretest-posttest two-group design was used. In the first stage, both groups filled in the background questionnaire and took the pre-test.

Two weeks later, the experimenters conducted a 45-minute lesson where they introduced and practised a set of 13 multi-words. The same multi-word units were taught as embedded in a song (Song group) or in recorded spoken sentences (control group). The structure of a lesson remained the same for both groups. First, depending on the group, the teacher administered gapped lyrics or gapped sentences. Learners listened to the recording twice and filled in the missing MWU's. Then, the teacher checked the missing items with the learners, clarified their meaning, and distributed a glossary with 13 English items and their Polish translations. After that, learners listened to the recording for the third time. This time the experimenters instructed them to either sing along or read along, respectively. Then, learners worked in pairs and paraphrased the meaning of the multi-words to their partner, whose task was to guess the right phrase. They took turns. Subsequently, learners listened to the recording for the fourth time. Towards the end of the lesson, they took a test that measured their immediate recall of the multi-word units (the immediate post-test). The third stage of the study took place seven days from teaching: learners did the same test (in this stage referred to as the delayed post-test).

The same steps were followed in Study 1 and Study 2. In fact, Study 2 mirrored Study 1 in all respects but the 13 tested items. In total, the two studies extended over six weeks. In the next section, we present the results from both studies, followed by a discussion.

RESULTS

In each study, the pre-, immediate post-, and delayed post-test scores obtained by the Song group and the control group were submitted to a 2 x 3 repeated-measures Analysis of Variance, a statistical technique for comparing several groups of means.

Figure 1 shows graphically represented score distributions for the two groups on the same test administered at three different points in time (a pre-test, immediate post-test and delayed post-test). The results from Study 1 and Study 2 are presented in the top and bottom panel, respectively. A 39-point scale was adopted.

In both studies, learners' recall of multi-word phrases differed relative to the teaching technique (at a significance level of $p < 0.05$) and a point in time ($p < 0.0001$). In Study 1, the two groups obtained roughly similar scores on the pre-test ($M = 5.58$ and $M = 4.83$ for the Song and control groups, respectively), and much higher scores on the immediate post-test ($M = 35.00$ and $M = 32.17$). The general pattern in Study 2 was similar (pre-test: $M = 4.93$ and $M = 3.57$; immediate post-test: $M = 32.71$ and $M = 29.57$). Given that, we shall address our first research question:

1. Will the Song group recall more multi-word units than the control group immediately after teaching?

The results show that the Song group recalled more multi-word units than the control group on the test taken immediately after the teaching activity. The mean difference in Study 1 was statistically significant ($p < 0.05$); however, in Study 2 the difference was not significant at the 5% level, and was only significant at the 10% level ($p = 0.079$).

In our second research question we asked:

2. Will the Song group recall more multi-word units than the control group a week after teaching has taken place?

The answer we found through Study 1 and Study 2 is affirmative. In Study 1, a week after the teaching activity, the Song group ($M = 33.08$) recalled significantly more multi-word

units than the control group ($M = 29.42$), at $p < 0.05$. In Study 2, the difference in learners' recall was even more pronounced (and significant at $p < 0.01$), again with the Song group ($M = 27.79$) having a recall advantage over the controls ($M = 22.29$).

We also compared whether learners in each group showed a comparable recall of multi-word units between the immediate post-test and the delayed post-test. Study 1 showed that while the difference between these two time conditions was statistically significant for the controls ($p < 0.05$), learners in the Song group retained a comparable number of phrases over a week and recalled them ($p > 0.05$). This implies that, after 7 days from teaching, the control group recalled the phrases less accurately than the Song group, as measured relative to their own performance on the immediate post-test. Study 2, on the other hand, revealed that — compared to their scores obtained on the immediate post-tests — both groups recalled fewer items (in the exact form as they were taught), with the immediate post-test versus delayed post-test difference being smaller for the Song group than the controls (at $p < 0.01$ and at $p < 0.001$, respectively).

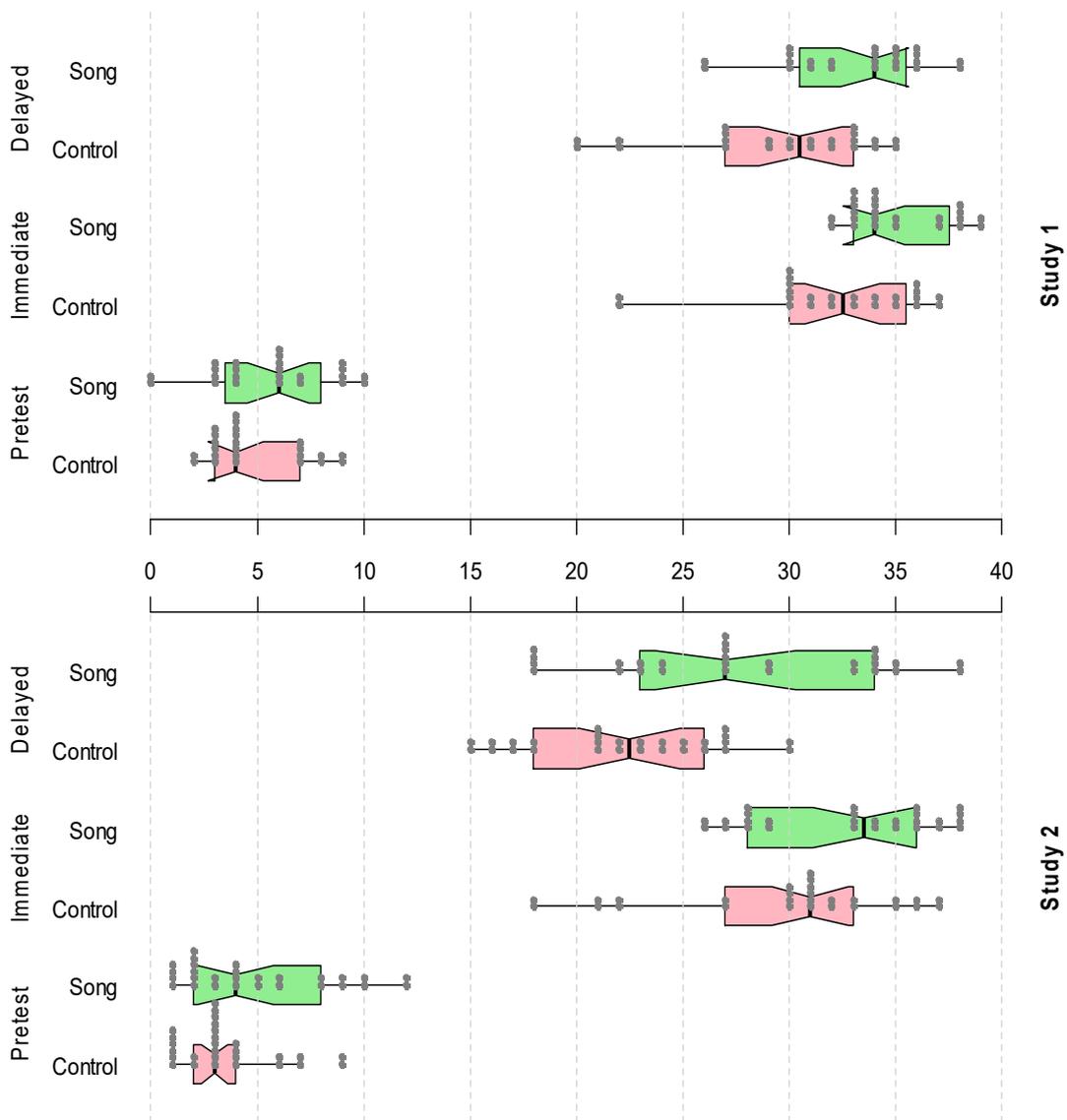


FIGURE 1. Distribution of Pretest, Immediate post-test and Delayed post-test scores for the Song and control groups in Study 1 (top) and Study 2 (bottom). Boxplots mark the median and inter-quartile range (IQR), with whiskers extending to $1.5 \times \text{IQR}$ from each edge of the box and notches drawn at $\pm 1.58 \text{ IQR} / \sqrt{n}$. All individual data points are plotted as stacked grey dots.

DISCUSSION AND RECOMMENDATIONS

DISCUSSION

The major findings from the two studies converge. Learners' recall of phrases was found to be dependent on the technique used to introduce the multi-word units. In both Study 1 and Study 2, the group taught with songs recalled more items (in the exact form as they were taught) than the control group, both when tested immediately after the lesson, and a week from the lesson. The latter finding is particularly interesting, as it implies that presenting the phrases in the context of a song helps learners to remember not only more of the multi-word units, but also promotes their retention for a longer time. This finding seems to tally with the naive perception of song lyrics being 'memorable': indeed, multi-word units learnt when presented in a song do seem to promote a more lasting memory trace.

The findings from our Study 1 lend further support to the view that songs are effective for teaching vocabulary in the FL classroom. A higher vocabulary gain on the immediate recall tests of learners taught with songs (vs. spoken sentences) mirrors the effects observed in earlier studies investigating vocabulary learning through singing in a foreign language (e.g. Hahn, 1972; Ludke et al., 2014; Smith Salcedo, 2010), as well as native language (e.g. McElhinney & Annett, 1996; Wallace, 1994). Our results for the immediate recall of multi-word units (MWU's) corroborate the chunking hypothesis (Miller, 1956) and the multicomponent model of working memory (Baddeley, 2000). In both groups, MWU's were presented auditorily. Learners in the Song group studied MWU's accompanied by melodic and rhythmic patterns, which — thanks to chunking smaller musical phrases into larger musical events — makes MWU's for the learners more salient, especially when bearing in mind that compared to speech, sung texts, on average, are delivered at a slower pace. Given that, learners are more likely to shift their attention to song-embedded MWU's, which promotes learning. The way in which notes, pitches, rhythmic patterns, and melodic phrases align with syllables, words, and multiword phrases allows learners to encode lyrics and melody together. These appear to be multimodally-integrated in the episodic buffer (Baddeley, 2000) and, with new associative links created between items, stored and retrieved alike. As a result, the non-verbal layer of songs can offer a memory 'hook' (McElhinney & Annett, 1996; Wallace, 1994). Song-teaching proved effective for encoding and retaining MWU's in short-term memory (STM), whereas the method using spoken sentences, even though richer in context than song lyrics, did not show to comparably optimize the process of learning MWU's and their subsequent retrieval. It also appears that processing chunked portions of language may decrease the load exerted on short-term memory (Baddeley, 2000), resulting in a more effective rehearsal. It might be the case that, overall, multi-word units in the Song group are rehearsed a greater number of times than in the control group. Such rehearsals can be vocal (overt sing-alongs) or sub-vocal ("in one's head"), and voluntary or involuntary. The sub-vocalized involuntary rehearsal of the song (e.g. its chorus) often activated in-between encounters with the song, in other words, the "song-stuck-in-my-head phenomenon", (Murphey, 1990) provides additional mental repetition of language. This, on the whole, may improve the articulatory rehearsal process in the phonological loop essential for new word learning. This, in turn, may lead to a recall advantage for the teaching method that immerses multi-word chunks in melody and rhythm lined up with lyrics.

The pattern of findings observed in our study for the immediate recall of MWU's holds for delayed post-testing (Study 2). Higher recall performance on the delayed post-test was observed in the Song group, which, again, is consistent with the effects of teaching through songs as evaluated a week from a song-based lesson reported by Tegge (2015). A few factors may contribute the most to the presence of the mnemonic benefit of songs for learning

multi-word units that carries over into a subsequent one-week spaced lesson. The very practice of listening to a song and singing along with classmates is usually an enjoyable, emotion-evoking, and classroom routine-breaking experience. Such and other similar contextual features of the experienced past learning event, along with accompanying event-associated emotions, are encoded and stored in episodic memory, a long-term memory oriented to a person's past (Tulving, 1972). And indeed, in the context of song-teaching, the socio-affective qualities of the song-based lesson module (see the section titled **Why teach a foreign language through songs**), encoded and stored in a learner's episodic memory, act as powerful mnemonics aiding vocabulary learning and retrieval from memory. Thanks to episodic memory, FL learners can mentally re-experience the learning event, along with verbal input that they studied then. Hence, the superior performance of the Song group on the post-test spaced a week from teaching, compared to the group that did not listen to a song in class, may be explained through multimodal coding of MWU's along with music (melody, rhythm, temporal accents), experienced emotions, and other details of the past encounter with the song, which can now serve as retrieval cues, facilitating the very process of retrieval and recall.

PEDAGOGICAL RECOMMENDATIONS

A large body of studies evaluating the benefits of methods and activities used in the classroom context for vocabulary teaching and learning have placed single-word items at the centre of their attention. Yet, as illustrated earlier (see the section titled **Why focus on multi-word units** above), there are many compelling reasons to promote learning of multi-word units among foreign-language learners, the two most vital being: (1) a considerable part of language is formulaic; and (2) learning a chunk of language longer than a single word at a time (and thereby circumventing working-memory constraints) is crucial for achieving higher levels of FL/L2 proficiency. While teaching and learning formulaic foreign language has already been enriched by various incidental, semi-incidental, and intentional methods, procedures, and practices (for a comprehensive overview, see Pellicer-Sánchez & Boers, 2018), still only a few empirical attempts have verified the potential effectiveness of the song-method for teaching multi-word phrases. Although many FL teachers, overall, have a positive view of the song-method and use it in their language classes for teaching vocabulary to adults, many of them point to external factors that render songs employed less frequently in the FL teaching. As evidenced by Tegge (2018), difficulty in finding suitable songs and in fitting songs in with the curriculum, time and effort required to prepare and implement song-based lessons, and the discrepancy between classroom time spent song-teaching and learning outcomes do not exhaust the list of reported disincentives to use songs. Below, we briefly present some recommendations on using songs for teaching EFL multi-word units.

Songs lend themselves well to repeated exposure to recurring multi-word units. Multiple encounters with the same song allow EFL learners to notice, encode, retain, and consolidate nuances and idiosyncrasies of phraseology in the process of learning new longer multi-word units that might otherwise go unnoticed (e.g. types of articles used, determiners, prepositions, and tenses). Repeated listening to and singing the song lyrics also raises their awareness of pronunciation subtleties and speech processes occurring at the boundaries between individual words in multi-word units (linking, assimilation, elision), and provides connected speech-oriented pronunciation practice. Interestingly, while rote repetition in general is said to bring monotony in language classes easily, the use of songs (repetitive as they are) helps to stave off classroom boredom and promotes learner motivation (Jolly, 1975; Richards, 1969). The song-based teaching module would therefore show additional gains for EFL learners, if the learners were exposed to the song several times in one sitting (i.e. during

the same lesson). Three or four encounters with the song (through ‘listen-only’ and ‘listen-and-repeat’ procedures) would serve well as drill tasks, where the amount of repetition is considerable enough to drill multi-word units effectively, and low enough to maintain (or raise) EFL learners’ interest. In effect, multiple exposures and sing-alongs facilitate the processing of the newly-learned multi-word units, and lay the foundations for transforming fresh and still temporary memory traces into more stable, long-lasting ones (consolidation and long-term storage). To enhance subsequent recall, and, consequently, to maximize learning benefits with the use of songs, and to foster consolidation, it would make sense for EFL teachers to play the song again during the next lesson.

One of the intrinsic qualities of songs is that they appear to sensitize foreign language learners not so much to semantic content as to surface structure and word form (see Tegge, 2015, pp. 188-192). Song-based lessons then would benefit from complementary meaning-centred activities (e.g. paraphrasing, as used in our study; summarising, questioning, and predicting). Integrating elaborative rehearsal strategies into a song-based lesson plan would extend learners’ opportunity and time to process semantic content of multi-word units resulting in more effective retention and recall of meaning.

The theme of love has presumably prevailed across the realm of songs for centuries, and it ranked top among the most popular lyrical themes in U.S. during the period 1960-2010 (see Christenson, de Haan-Rietdijk, Roberts, & ter Bogt, 2019, pp. 200, 203). As a matter of fact, it appears legitimate to view songs as a valid vehicle for teaching multi-word units in classes revolving around relationships, and by extension, family, marriage, friendship, adolescence and adulthood, and lifestyles. Since many songs are emotionally charged (and love and relationship songs in particular), they are also ideally suited for introducing the topic of feelings and emotions, and framing a lesson plan with an objective to teach positive emotion-laden multi-word units (e.g. *make it home, start a career*) or/and negative ones (e.g. *the truth eludes me, be hungry for fame*).

The chance that learners encounter the song taught in class outside the classroom, in everyday life situations, is relatively high, which, in this respect, makes songs enjoy a competitive advantage over somewhat more traditional FL teaching methods. However, using songs in FL classrooms is by no means a replacement for the latter. Therefore, a holistic approach to FL vocabulary teaching, where song-based lessons aimed at teaching multi-word units encourage noticing patterns (for salient phonemic repetition see Boers & Lindstromberg, 2008), and, at the same time, utilize a lead-in song, gap-filling, and high-elaboration activities can all together ensure that learners attend to the form of words as well as to their meaning.

CONCLUSION

Listening to songs seems to come naturally to many in this day and age, and especially so to digital-native smartphone users. Songs have the potential to reach a large and diverse audience, and bring along multiple positive gains as seen from the ELT perspective. Our findings indicate that songs may mediate the process of learning new multi-word expressions that, being very productive (especially those that allow for minor modifications), can be used in any situation where using a language for communicative purposes is essential, and where the economy of time and effort plays a role. When placed in a song context, multi-word units appear to leave a stronger memory trace: an effect that is normally reached through closer attention to meaning (i.e. through deeper processing) and elaborative rehearsal. Remarkably, while multi-word units alone have been reported to be highly accessible and easily-retrievable (as they are not built from scratch each time they are used, but are instead stored in the mental lexicon as whole chunks), pairing them with songs makes them even easier to retrieve from

learners' memory, as our findings show. Using songs to slip a dose of multi-word units into their classes may in the long run improve learners' recall of the taught phrases. By marrying the benefits of teaching a foreign language through songs with those of knowing and using multi-word units, teachers may make a language learner's experience a more pleasant and successful one. And, since humans can remember a large number of songs, each teeming with phrases to learn, the future of songs as a foreign-language teaching vehicle looks rosy.

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