

Verbal Memory and Popular Song: Possible Applications for Language Teaching and Learning

Rebecca Claire Coleman

Centre of English and World Languages, University of Kent, Canterbury, United Kingdom
Email: R.C.Coleman@kent.ac.uk

ABSTRACT

A major challenge for language teachers is equipping students with sufficient grammar, vocabulary and pronunciation to engage and articulate in a variety of contexts. Moreover, learners are required to retain and recall copious amounts of subject knowledge, often over a relatively short period. Despite the obvious disparity between formal language and the informal content and register of popular songs, they may offer a more interesting and effective method of rote-learning (memorising) or practising key language or phonology, revising for an exam, or engaging with discussion topics. This article considers some of the theory behind popular song and memorisation before discussing possible applications for language teaching and learning based on the author's previous research. It stresses the necessity for the incorporation of memory theory and popular songs in language teaching and learning methodology, as a strategy for enhancing memory through the kind of procedures exemplified.

KEYWORDS: Songs; Verbal memory; Psycholinguistics

INTRODUCTION

“There is no learning without memory, and language learning in particular, with the enormous load of vocabulary that it requires, is largely a memory task; it demands the ability to store and retrieve enormous amounts of memorized information” (Thornbury, 2006, p.129). Growing up, songs and rhymes in both my mother tongue, English and my L2 languages, French and Spanish were embedded in my memory, and perhaps because they were offered to me in an emotive, relaxing and/or motivational atmosphere, they stuck there never to be erased. Furthermore, not only was this information retained but it seems these memorised verses are able to take me back to classroom situations, special times and places in the past and moreover influence my present and future thoughts.

During the audio-lingual period, verbal memory was a vital attribute in language learning and reflected in rote-learning pedagogy, which favoured the continuous repetition of target language for memorisation (Gairms & Redman, 1986, p.93). Likewise, it was widely used in the aptitude tests of the 1950s and 1960s, the Modern Language Aptitude Test (MLAT) and the Pimsleur Language Aptitude Battery (PLAB), which listed it as a key component of language aptitude (Lightbown & Spada, 2006, p.58). Nevertheless, explicit approaches such as communicative language teaching (CLT) which emphasize creative and spontaneous use of language over memorisation were favoured. “For this, [...] pattern drilling was either completely abandoned or replaced by communicative drills” (Dörnyei, 2007, p.34). However, this paper argues that meaningful language presented in a popular song could offer a more interesting and effective method of rote-learning (memorising) language, and a popular song activity based on lexical phrases and memory theory, could provide a platform on which to build successful language learning.

It is my belief that when classroom methodology using popular music is informed by an enhanced knowledge of the role of memory, it will cater for a wider range of learning preferences, increase motivation and raise vocabulary and grammar retention rates. Having taught international students and trained English Foreign Language (EFL) teachers at language schools and Universities in the United Kingdom (UK) over the last 10 years, the potential of using popular music for language acquisition has been evident. Not only does it appear to provide a cultural snapshot, but also a meaningful authentic context from which to deduce form and meaning. Therefore, it is possible to concur with Jolly (1975) who stated, even more than forty years ago, that “language teachers may be missing a great deal by not exploiting songs and other rhythmic language compositions as classroom teaching aids” (p. 11).

COGNITIVE PROCESSES INVOLVED IN MEMORISATION: THE ROLE OF VERBAL MEMORY IN LANGUAGE LEARNING

Committing words and language to memory is a highly complex cognitive process involving “attention, rehearsal, encoding and retrieval, which govern the processing of information within stores and the movement of information from one store to another” (Gray, 2002, p.326). As shown in Figure 1 below, Sensory Memory (SM), briefly stores audio or visual input unconsciously while a conscious decision is made as to whether the stimuli may be of value to the short-term memory (STM), or working memory (WM) as it is more commonly known (Gibb, 2007; Gray, 2002). This process is called *attention*, that is to say, only information which is attended to (consciously selected) becomes part of the WM (Gray, 2002). “In order to attend to input, techniques such as noticing and deep processing [...] can be employed” (Coleman, 2014, p.54). The WM, which is limited in capacity, stores this input for around 30-45 seconds through conscious rehearsal (repeating over and over) or chunking (grouping information), and if successful encodes (transfers) it to long-term memory (LTM), which has a significantly larger and longer storage capacity and requires no conscious management (Gibb, 2007; Gray, 2002; Skehan, 1998). From here, learners retrieve information for immediate communicative use (Thornbury, 2006).

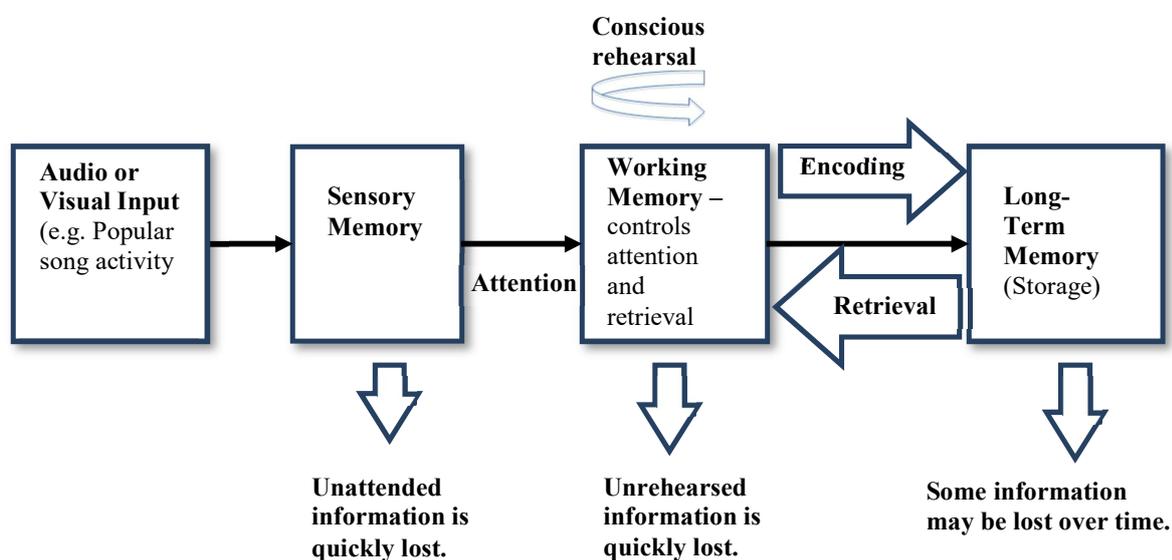


Figure 1: The model of the human mind. Adapted from Gray (2002).

Baddeley and Hitch’s (1974) model of WM, which has been revised a number of times (Baddeley, 2003), identifies three components of verbal memory: “the central executive, the visuospatial sketchpad, and the phonological loop” (Carroll, 2008, p. 48). The phonological loop (PL) stores verbal and acoustic information, and the visuospatial sketchpad (VS) is its visual equivalent (holding visual and spatial information) (Gray, 2002). In simple terms, the former holds onto ‘spoken sound’ (Gibb, 2007, p.66); whereas, the latter allows us to form visual images, rotate them in our minds and convert words into images and so on (Carroll, 2008). Both are dependent on the central executive, an attentional control system (Baddeley, 2003) which exerts control over what new information is attended to and drawn into the WM from the SM, and what stored information is retrieved from the LTM. It allocates tasks to the PL and VS accordingly (Carroll, 2008; Gray, 2002).

Baddeley (2003) breaks the PL down into two subcomponents, a temporary storage system which holds memory traces over a matter of seconds, during which they decay, unless refreshed by the second component. Carroll (2008, p.48) names these the phonological store and the articulatory rehearsal system respectively. ‘This articulatory rehearsal system, or subvocal rehearsal system as Baddeley (2003) names it, “enables us to covertly or overtly rehearse materials, thus prolonging their stay in the phonological store”

(Carroll, 2008, p.48). Therefore, the repetition of spoken sound as a memory tool in classroom methodology is highlighted here. Nonetheless, more recently there has been the addition of a fourth subsystem, the 'episodic buffer' (Baddeley, 2003) which "is assumed to form a temporary storage system that allows information from the subsystems to be combined with that from long term memory into integrated chunks" and "assumed to form a basis for conscious awareness" (Baddeley, 2003, p.203).

DISCUSSION

Findings from the literature, my Classroom Research (CR) in 2014 based on a small sample of Chinese and Japanese students' and their acquisition of English grammar and lexis in two popular songs and personal observations to date appear to indicate that they could be one tool for enhancing verbal memory. This may highlight the point that language teachers can respond to these precursors of verbal memory theory by maximising the audio (sounds), visuals, conscious attention (noticing), deep processing, lexical phrases (chunks of information), repetition (conscious rehearsal), storage, retrieval, and recycling when using popular song (Coleman, 2014).

MEMORY AND NOTICING

Often learning a language requires 'noticing'; for example, "the language is drawn to the attention of the learners" as they come across it either by instruction, billboard, TV program or newspaper (Harmer, 2007, p.54). In the classroom, teachers help learners' to notice language form by writing up, underlining or drilling key words or phrases. A popular song gap-fill is one way in which language can be drawn to learners' attention, or as Schmidt (1990) coined 'noticed'. Nevertheless, just 'noticing' a word does not equal acquisition. Harmer (2007) argues that for it to take place there needs to be considerable exposure. Therefore, the more frequent the form in the lyrics and the more often the learner hears the popular song in the classroom, on the radio, in shops and in a nightclub, or on the internet the more likely it is 'noticed' and entered into LTM intake. As teachers, we should be exposing our students to as much language as possible in as many forms/means as possible, including song, and encouraging its usage inside and outside the classroom.

My CR showed that although retention rates inevitably differed according to the learner and musical preferences, in terms of SM, the popular songs were a 'motivator' or 'driving force' within the classroom, fostering community and attracting the learners' attention to collocations, target forms and word order. Popular music gave the learners authentic exposure to language embedded within its lyrical content and appealed to them both audibly, visually and emotionally, stressing both its effective and affective qualities.

DEEP PROCESSING

Certain words or phrases can just as easily go unnoticed or be forgotten over time. "This may happen because we didn't really pay much attention in the first place, or because no associations can be made with existing memories" (Gibb, 2007, p.75). To encode information into our LTMs consciously, 'memorization techniques' are employed. According to Thornbury (2006, p.128) "if you memorize a word or expression, you intentionally commit it to memory". Certain songs provoke 'deep thought' owing to their content, Gray (2002, p.341) terms this process 'elaboration or elaborative rehearsal' meaning that 'we remember things that capture our interest and stimulate our thought'. Therefore, this allows students to do more than just simply repeat a word and tie it to a structure of information that already exists in the LTM (Gray, 2002, p.341) and 'personalise it' (Gairns & Redman, 1986, p.100).

The need for more personal authenticity and meaningful activities is highlighted. Male (1992) as cited in Williams and Burden (1997) studied academically retarded children's ability to transfer memory strategies from one type of learning task to another, and it was found that contrary to prevailing views, this could be accomplished by establishing the 'personal authenticity' of the task. In line with Gairns and Redman (1986, p.100) 'more meaningful tasks require learners to analyse and process language more deeply, which helps them to commit information to LTM'. Time is also an important consideration; 'our ability to retrieve an item from LTM declines over time unless we retrieve the item frequently' and the rate of this decline varies tremendously, depending on the depth of original processing and the circumstances under which we attempt to retrieve it (Gray, 2002, p.346).

CHUNKING

The most famous and widely known work in this field resides with Baddeley, who defines WM (STM), as “the temporary storage of information to be necessary for a wide range of complex cognitive activities” (Baddeley, 2003, p.198). For instance, holding conversations; that is to say, understanding, reasoning and responding to a partner in real time situations (Carroll, 2008, p.47). Therefore, it is clear that WM has an important role to play in language learning. Moreover, the confines of the WM “stresses the need for automaticity” and instinctive replies that do not compromise it (Thornbury, 2006, p.129). Here Gibb (2007) suggests the use of ‘chunking’ - ‘combining numbers into groups that are easier to remember than their constituent parts: for example, 1984-2001 instead of 1,9,8,4,2,0,0,1’. “A typical person will be able to remember a sequence of seven numbers, but fewer words, especially if they are long and therefore take longer to repeat” (Gibb, 2007, p.66). WM limitations “drive learners to construct higher-order chunks out of lower-order chunks” (Ellis, 2008, p.469). Examples in teaching are collocations, phrasal verbs and prepositional phrases.

According to Boers and Lindstromberg (2008, pp.423-436) “anyone wanting to attain a high level of L2 proficiency had better set about trying to learn lots of lexical chunks” or naturally possess ‘a large STM span’ which may help the learner to hold on to more new words whilst attending to meaning (Gray, 2002, p.33). Nattinger and de DeCarrico (1992, p.1132) add that “a great deal of the learning task is thus to ‘chunk’ unfamiliar material in meaningful ways and create more effective lexical phrases”. Interestingly, Skehan (1998, p.40) argues “that much of the time we rely, during rapid communication, on large chunks of memorized language” such chunks help to buy us processing time. Therefore, an input method containing sizeable and meaningful ‘chunks’ would be a useful language tool for reducing the load on the PL and increasing vocabulary and grammatical learning. In my CR, the chunking of lexical phrases within the popular songs appeared to maximise the WM capacity, even if it appeared to aid the memory retention of content over functional words; that is to say, nouns as opposed to articles

REPETITION

WM plays an integral role in language learning, but its confines stress the need for repetition, as previously mentioned, and chunking. For teaching purposes, language, such as prepositional phrases and collocations, could be presented and repeated as chunks in a popular song activity. Therefore, according to their frequency in the song and their relevance and usefulness for the student, teachers can choose different phrases of varying lengths in a popular song gap fill activity. Typical examples of these lexical phrases include ‘*in summer*’, or ‘*in the middle of*’ (Beatles: Penny Lane, 1967). However, students may choose to acquire other chunks of language not prescribed by the teacher. With these chunks one word in each lexical phrase needs to remain in order to create a ‘hook’, that is useful in terms of LTM retrieval; for example, the hook for *in the middle of* could be the preposition ‘*in*’.

Popular songs could easily revive old-style rote learning methods, as they appear to give pleasurable repetition. They can prompt painless review, rehearsal, or recycling of language both in and out of the classroom, thus facilitating WM, which is necessary for the LTM transferral. In my CR, the lexical phrases in the popular songs were repeated several times for each listening activity and the interest generated from the popular tunes encouraged learners to re-listen to them in their own time on Facebook/YouTube.

PRONUNCIATION AND DRILLING

A popular song gap-fill could help learners’ understanding of phonology; for instance, to understand the stress in words or lexical phrases, the function words could be removed from a popular song so that learners could practice listening out for them and make a distinction between them and the content words. Additionally, by reading aloud, silently mouthing, humming or even singing the popular song could make drilling new vocabulary more attractive. Moreover, it could give learners the confidence to produce chunks of language accurately in controlled practice or reinforce the phonology of the key structures. Another implication could be for teachers to use a popular song gap-fill as a revision tool in subsequent lessons. Therefore, as an area for exploration in its own right, the phonology and music relationship has several implications for language pedagogy.

Reading aloud, singing, silently mouthing or mumbling song lyrics could also help learners to rehearse and revise the lexical phrases in a motivating way. Indeed, Ludke, Ferreira and Overy's (2013) recent study offers the first experimental evidence that singing can aid verbal memory. Moreover, it could give learners the confidence to produce chunks of language accurately in controlled practice or reinforce the phonology of the key structures in their minds and it could potentially be a revision tool in subsequent lessons. In my CR, the popular songs appeared to be a practical tool for identifying phonological errors and pre-teaching, rehearsing and revising sounds, integral to the memory retention of phonological form. In addition, the explicit drilling of the lexical phrases during the input stage increased salience and allowed the learners to notice the gaps in their learning.

LEXIS AND GRAMMAR

Popular songs can help learners to retain, store and retrieve more information than may otherwise be possible, and so could potentially enhance their lexical and grammatical ability. The memory retention and recall of lexical phrases is especially important as it can potentially increase the learners' familiarity with widely used language.

Songs can be very successful for teaching lexis, especially when it links specifically to a classroom topic (Purcell, 1992). Moreover, "if appropriate tasks are given, songs give pleasurable repetition with no boredom and provide active participation in the language" (Griffiee, 1992, p.6). However, in line with Purcell (1992, p.193), 'too many words', or 'a low frequency in common usage' can make it difficult for learners to store lexis as 'a meaningful part of their own repertoire'. Additionally, "unfamiliarity with lexis may lead to what is heard being overruled by the selection of other words which have a definite know meaning" (Smith, 2003, p.119). Forgetting or producing false memories is also an important consideration in memorable pedagogy, L2 speakers can often mishear or misinterpret an aural utterance. The term 'mondegreen', coined by Sylvia Wright in 1954, linguistically accounts for this event (Smith, 2003, p.113). Song lyrics such as, Cheryl Cole's single Parachute (2010), has listeners confuse the phrase 'I don't need a parachute' with 'I don't need a pair of shoes'. Popular songs also occasionally pose problems as "their perpetrators are not universally renowned for clear diction or coherent content" (Smith, 2003, p.113).

Popular songs can also be useful for teaching grammar. "For an enthusiastic teacher it does not require much time to locate songs which contain grammatical structures" (Jolly, 1975, p.13) or chunk grammar within its lyrics. Stevic (1976) observes that in 'recognition experiments', whereby subjects listened to melodies or parts of them, "experienced listeners performed better and successfully performed analysis and chunking, whereas the naive listeners could only respond to single notes or to whole melodies" (Stevic, 1976, p.16). Also, Purcell (1992, p.194) states "having worked on such structures in dialogues, pattern drills or other class exercises, learners are frequently pleasantly surprised to encounter them in songs". As song messages 'touch deep-seated emotional or aesthetic chords', contain 'repetitive patterns' and above all 'stick in the head' (Murphey, 1992, p.3); they could be very motivational in giving 'grammar' a more positive connotation and aiding LTM retention by making it meaningful for the learner.

EMOTIONAL MEMORY JOURNEY

Popular songs motivate, drive and foster community within the classroom and attract learners' attention to grammar and lexis. They introduce common/popular language, culture and appeal to learners audibly, visually and emotionally, stressing both its' effective and affective qualities. Therefore, these 'emotional memory journeys', as coined in my previous article, are created, thus allowing learners to richly process form and meaning and store lyrical content alongside positive episodic memories (Coleman, 2014, p.66).

CONCLUSION

The role of memory is evidently crucial in successful language learning and although most of the suggestions here, which are based on literature, CR and personal experience, are perhaps quite predictable, the collected findings indicate that popular songs are a potentially powerful tool for both aiding memory, and for developing verbal memory. Subsequently, the above applications have significantly informed my foreign language pedagogy and teacher training and I have observed positive results, especially with lower level learners who struggle to build up lexis and grammar and engage positively with the subject and teacher trainers who have a negative perception of teaching lexis and grammar. There still needs to be further research into its framing and development with songs and other classroom

strategies; however, this article stresses and reinforces the necessity for popular songs to take a more elevated position within language classrooms; as a strategy for enhancing memory through the kind of procedures exemplified.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

REFERENCES

- Baddeley, A. D. (2003). Working memory and language: an overview. *Journal of Communication Disorders*, 36(3), 189-208.
- Boers, F., & Lindstromberg, S. (2008). Phonemic repetition and the learning of lexical chunks: the power of assonance. *System*, 36(3), 423-436.
- Carroll, D.W. (2008). *Psychology of Language*. USA: Thomson
- Cheryl Cole. (2010). *Parachute* [CD]. London: Syience.
- Coleman, R. (2014). Exploratory practice: Researching the impact of songs on EFL learners' verbal Memory. *Journal of Second Language Teaching and Research*, 3(1), 53-70.
- Dörnyei, Z. (2007). *Research methods in applied linguistics: quantitative, qualitative, and mixed methodologies* Oxford: Oxford University Press.
- Ellis, R. (2008). *The study of Second Language Acquisition*. Oxford: Oxford University Press
- Gairns, R., & Redman, S. (1986). *Working with words: A guide to teaching and learning vocabulary*. Cambridge: Cambridge University Press.
- Gibb, B. J. (2007). *The rough guide to the brain*. London: Penguin Books Ltd.
- Gray, P. (2002). *Psychology*. New York: Worth Publishers.
- Griffiee, D.T. (1992). *Songs in action*. United Kingdom: Prentice Hall.
- Harmer, J. (2007). *The practice of English language teaching* (4th ed.). Harlow: Pearson Education
- Jolly, Y. S. (1975). The use of songs in teaching foreign languages. *The Modern Language Journal*, 59(2-1), 11-14.
- Lightbown, P. M., & Spada, N. (2006). *How languages are learned* (3rd ed.). Oxford: Oxford University Press
- Ludke, K.M., Ferreria, F., & Overy, K. (2013). Singing can facilitate foreign language learning. *Memory and Cognition*, 42(1), 41-52.
- Murphey, T. (1992). *Music and song*. Oxford: Oxford University Press.
- Nattinger, J. R., & DeCarrico, J. S. (1992) *Lexical phrases and language learning*. Oxford: Oxford University Press.
- Purcell, J. M. (1992). Using songs to enrich the secondary class. *Hispania*, 75(1), 192-196.
- Schmidt, R. W. (1990). The role of consciousness in second language learning. *Applied Linguistics*, 11(2), 129-158.
- Skehan, P. (1998). *A cognitive approach to language learning*. Oxford: Oxford University Press.
- Smith, G. P. (2003). Music and mondegreens: extracting meaning from noise. *English Language Teaching Journal* 5(2), 113-121.
- Stevic, E.W. (1976). *Memory, meaning and method* (2nd ed.). Boston: Heinle and Heinle
- The Beatles (1967). *Penny Lane* [CD]. London: EMI Studios.
- Thornbury, S. (2006). *An A to Z of ELT*. Oxford: Macmillan Education.
- Williams, M., & Burden, L. R. (1997) *Psychology of language teachers*. Cambridge: Cambridge University Press
- Wright, S. (1954). The Death of Lady Mondegreen. *Harper's Magazine*, 209 (1254), 48-51.