MAKING VOCABULARY MEMORIZATION STRATEGIES MORE EFFECTIVE AND ENJOYABLE FOR FIRST YEAR CHINESE UNIVERSITY STUDENTS

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ABSTRACT

The paper reports an effort to assist a small volunteer group of Chinese university students to overcome the great difficulties encountered in learning vocabulary by introducing them to three techniques, each proven to promote successful vocabulary learner, as an alternative to the traditional rote memorisation to which they are accustomed. Eight female first-year English majors at Jingchu University of Technology, Jingmen, Hubei, volunteered. For a period of eight weeks, their teacher, the first author, trained them in a number of vocabulary learning techniques. Their progress and attitude towards the new techniques were carefully monitored. The results indicated that the new techniques led to better learning than the traditional method. The study pointed to the need to teach further strategies, such as learning lexical bundles and better time management.

Keywords: vocabulary, memorization, learning strategies, Chinese learners of English

Introduction

While vocabulary learning had long been a neglected area in applied linguistics, testified to by a number of linguists (e.g. Richards, 1976; Levenston, 1979; Meara, 1980), the focus has gradually shifted over the last three to four decades and, since the 1980s, has become an area of an immense amount of research interest. The resulting research demonstrated that the number of words necessary for proficiency in English was far higher than previously believed, with the minimum recommended number of words moving from two to three thousand words up to five thousand (e.g. Laufer, 1997), and more - to as much as eight or ten thousand (e.g. Hirsch & Nation, 1992; Nation, 2001). Indeed, it has been shown that vocabulary size, i.e. the number of words to which one can attach a

meaning, is the best predictor of reading comprehension (Coady, 1997) and listening comprehension (Kelly, 1991).

Despite the recognition that helping learners acquire large amounts of vocabulary is key to promoting language proficiency, and despite the vast amount of laboratory research into the most effective means to achieve this, students continue to struggle to amass the necessary number of words (Zhang Guiping, 1996; Ma, 2009). The difficulty in acquiring this number of words had early been cited as the main reason second language learners give up their efforts when they reach the intermediate stage at which point they are faced with the need for massive vocabulary expansion (Winitz, 1978). The difficulty for Chinese learners is particularly acute due to both the language distance and the cultural load differences involved (see Ma, 2009).

Teachers can guide learners in their vocabulary learning, not just by providing them with the materials, synonyms, translations and contexts, but by enabling them to understand the alternative ways of learning, and to help them to do so more efficiently, more effectively and, hopefully, more enjoyably than at present (Deconinck et al., 2010; Kelly & Li, 2005). However, studies have shown that language learning techniques that were successful under experimental conditions failed to yield similar results once incorporated into a real-life language learning situation (e.g. Condon, 2008; Pica, 2005; Fuentes, 1976). The aim of this small-scale study therefore is to establish, through teacher observation and student feedback, the specific aspects of three tried-and-tested vocabulary learning techniques that Chinese learners of English may find most useful, beneficial and enjoyable.

Vocabulary Learning Techniques

While rote memorization had long been the most popular way of learning a new word in the West, i.e. repeating or writing it out unthinkingly many times until the item 'sticks', so to speak (Kelly, 1985), other methods have since emerged and are today widely used in the classroom. The research underpinning these alternatives relies on a number of language learning principles, which have been widely cited in language learning literature (e.g. Sökmen, 1997; Nation, 2001; Condon, 2008). These principles include: the integration of new knowledge with old (Coady, 1993); deep levels of processing/engagement (Sökmen, 1997; Barcroft, 2004; Laufer & Hulstijn, 2001, Deconinck et al., 2010); employing imagery (Higbee, 1977; Paivio & te Linde, 1982; Pressley et al., 1982; Richardson, 1980); frequent encounters with new vocabulary (e.g. Rott, 1999; Waring & Nation, 2004); and active recall, where retrieving an item from

memory leads to better learning than re-presentation of the material (Baddeley, 1997). Each of these principles has been proven to promote learning and, for this reason, have given rise to a number of vocabulary learning techniques, the most widely used of which are outlined below.

The use of **mnemonic technique**s has been demonstrated to be very effective in leading to the learning and retention of vocabulary. There are a number of different types of mnemonic techniques including the keyword method (e.g. Kelly 1985, 1986; Van Hell & Candia Mahn, 1998) and the use of alliteration (Boers & Lindstromberg, 2005; Kelly & Li, 2005). Mnemonic techniques promote learning for a number of reasons. They may differ in their complexity, but they have certain features in common. First they require the learner to create a link between what s/he already knows and a new item. This, of course, is the basic principle of all learning, i.e. the integration of new information with old; in accordance with the well-known theory of Craik and Lockhart (1972), it is the depth of processing, and the number of links that can be established with what one already knows that ensure that new information is securely lodged in long-term memory. Secondly, there is evidence that when there is dual modality input, i.e. there is focus on the visual written form of a word plus its aural form, retention of both forms lasts longer (e.g. Kelly, 1992). The fact that we remember images better than words (Richardson, 1980) is a further argument for forming images when we are learning new vocabulary. As Paivio and Desrochers (1979) have demonstrated, this can be done with abstract items as well as concrete ones and, they argue, is a way of directly accessing the meaning without relying on translation.

The production of original sentences or, in Swain's (1996) words, "pushed output" has also consistently yielded positive learning outcomes with regards to accuracy (Swain, 1996) and retention (Joe, 1995; Laufer, 2001). Requiring learners to generate original sentences containing new items of vocabulary is demanding and difficult, but it requires them to engage cognitively in the task and focus on both the forms and meanings not just of the words to be learned but the other words in the sentences. This not only encourages them to engage in deeper levels of processing but also to integrate new knowledge with old.

Vocabulary practice/rehearsal is, according to Baddeley (1997, p.113) "rather more useful than any of the more traditional visual imagery mnemonics" and,

according to Morris et al. (2005), attempting to retrieve items from memory at increasingly longer intervals is a powerful technique for improving recall; these findings from the field of psychology have led to the principle of expanding retrieval practice (Landauer & Bjork, 1978; Nation, 2001). The learning technique combines the principles of active recall and frequency of exposure, as it relies on repeated successfu*l* attempts by the learner to retrieve the item from memory.

Students' Experience with 'New' Vocabulary Learning Techniques

Approach

To further explore the benefits of increasing learners' awareness of vocabulary learning techniques other than rote memorisation, we conducted a small-scale study with a group of eight volunteers drawn from a class of 38 first year English language learners at Jingchu University of Technology, Hubei, China. The students were English language majors enrolled in a compulsory English intensive reading course which consisted of two two-hour classes – a total of four hours a week. All claimed never to have had any training in vocabulary learning. The study aimed to establish learners' reactions to a variety of techniques in order to identify those that might be worthy of further focus and elaboration in the classroom.

These techniques were introduced in spring of the second semester and continued in the first semester of the students' second year. The training in vocabulary learning techniques lasted for eight weeks altogether. It took place outside regular timetabled hours and each session lasted for approximately 45 minutes. The teacher first outlined a number of vocabulary learning techniques to the group. Proven in the research to be effective in retention, they consisted of two learning techniques (a - b) and one rehearsal technique (c), as follows:

   a) Mnemonic techniques: find a keyword/verbal mediator, i.e. a word that the students already know and that resembles in sound the word to be learned, and form an image and/or an imageable sentence. To give an example provided by Pressley and Levine (1981), to learn the Spanish word *carta* meaning *letter*, imagine a letter lying inside a supermarket *cart* (British English: trolley). On encountering the word *carta*, the student will 'see' the *cart,* the keyword, and thus access the meaning.

b) Pushed output: take a number of words to be learned and put them together into a sentence or short story. For example, the paragraph below, generated by our students, may be used to learn the words *vacation, scar, grimly* and *stammer*.

> *On her vacation to an isolated island last summer, she constantly met a man with a scar on his face, grimly staring at her. One night, the man appeared several times on her way to the hotel; she shrieked and stammered: "Who are you? What do you want?"*

c) Vocabulary rehearsal using cards: write on one side of a card the English vocabulary item to be learned and on the reverse side the Chinese translation. Learners were urged to use them to frequently test themselves, actively retrieving the vocabulary items from memory, at any odd moment to see if they could remember the given word on the other side.

This type of rehearsal differs from the rote memorisation technique typically employed by Chinese learners in two respects. First, rather than a single word and its translation, the card usually contains the word to be learned along with other words, which are already known to the learner, that may be typically found with it (e.g. to learn the word *havoc*, the expression *the animals created havoc* appears on one side of the card, with the Chinese translation on the reverse side).

The second difference between the card system and what is regarded as simple rote memorisation is that with the card system, once the learner has committed the vocabulary item to memory, he/she must then successfully retrieve that item from memory at increasingly longer intervals over the coming weeks, in recognition of the fact that frequency of exposure is directly related to how successful one is in learning a vocabulary item.

Although both rote memorisation and active recall require committing new words to memory, the provision of context, integration of known vocabulary (e.g. *animals, create*) with the new item (e.g. *havoc*) and repeated and spaced active recall mean that the card system is a far more pedagogically sound learning technique when compared with rote memorisation.

This study reports on the teacher's observations. At each of the meetings, notes were kept on the students' progress and reaction to the new learning methods. She kept note of each session and wrote down her observations in respect of the group and of the students individually. Each class consisted of three stages:

Stage 1: For the first three weeks, the teacher chose one technique to present and explain to the class. The explanation also included a practical illustration of how the technique could be used, employing vocabulary items that were likely to be new for the students. This part took approximately 15 minutes. From week four onwards, no further new techniques were introduced, but examples of how the various techniques could be used were re-presented to the group.

Stage 2: Students reflected on, and found ways of implementing, the technique for vocabulary items they themselves had selected for learning (approximately 10 minutes).

Stage 3: Group discussion on usefulness (or otherwise) of the methods (approximately 20 minutes).

The Keyword Method
While all of the participants initially attempted to adopt the keyword method, many did not persist with it and those that did only managed to come up with a few in their own language, which was understandable given the huge lexical and phonetic gulf between English and Chinese. Here are some examples:
- To learn *woe*, a link was made with 我wo (first person pronoun I) and the sentence formed: 很悲伤，因为我爷爷去世了。Hen bei shang, yin wei wo yeye qushi le (I feel great sorrow because my grandfather died).
- To learn *touchy*, the keywords were 她ta (she) and 气qi (angry): 她很容易生气 ta sheng qi (she easily gets angry).
- To learn *fee,* link it with 费fee, tuition, expense (fei): 费用很高 *the fee is a large amount.*

More often keywords were found in English. For instance, in order to
- Learn *stiff*, link it with *Steve*: *Steve is very stiff.*
- learn *fool*, link it with *folly*: the *fool* always does the follies

In the following instance both a Chinese and an English keyword were used:

- To learn *lucid*, a link was made with 路*lu (road)* and 看*kan (see)*, thus using one Chinese and one English keyword: *The road becomes clear after the fog has gone.*

It is to be expected that, in addition to the typical grammatical and syntactic mistakes that Chinese learners make, the use of the keyword or the word to be learned is not always accurate nor sometimes is the meaning correctly accessed (see *follies* and *lucid*). It is important therefore that teachers go beyond merely presenting techniques such as the keyword technique to learners; while it has proven to be effective and worth the additional time investment, it is nonetheless a complex one, and even more so for the Chinese learner. Additionally, over the course of the eight-week training session, it emerged that students derived considerable benefit from being able to work together in small groups in order to come up with keywords, mental images and short stories to assist in vocabulary learning. For example, by the third session, students admitted that they had rarely used the keyword method themselves at home since, as highlighted by one student, they did not find it easy '*to think up keywords*'. In contrast, however, during the training sessions each week, the students were nonetheless able to work together to provide several examples of potentially effective keywords:

> *There is a bar behind the **barn***
> Chile is very ***chilly*** [Chile is pronounced 'zhili' in Chinese]
> *He **heaved** the heavy stone up the wal'*

Thinking up an effective keyword can be a difficult, time-consuming and frustrating experience when one is not used to the activity. But the learners' collaborative efforts appeared to act as a stimulus, allowing them to gain practice in coming up with effective verbal mediators/keywords and chain stories (pushed output) through negotiation and sharing of ideas. The practice was also stimulated by the competitive element.

Pushed Output and Story Chains
As with the keyword method above, the students often had difficulty in coming up with words and ideas themselves; however, when working together as a group in class, the combined effort often led to short stories which they found useful in their vocabulary learning. Below is an example.
To learn the words *moisture, adjust, accidentally, ideal, civilization, graciously, divorce:*

> *She **accidentally** met a handsome young man. She thought he was her **ideal** husband. They got married quickly and moved with him to his country. The climate was terrible there. She could not adjust to the **moisture**. Worse still, it seemed people there never understood her. When she **graciously** said hello and*

> *invited the neighbours to her house shortly after the wedding,*
> *they just stared at her with wide eyes. Oh, my God. She cried.*
> *"It seems I am living at the edge of **civilization**. Should I*
> ***divorce** my husband and get back to my world?"*

Other shorter versions included:

- He **embraced** me when he saw me, which made me very **embarrassed.**
- When there was the **flash** in the dark, we saw her **flushed** face.

The Card System

Of all the techniques outlined by the teacher, the card system proved to be the most popular: the majority of students continued to use this rehearsal system for the duration of the study, with all of them employing it on a daily basis until exam pressure began to interfere (in week 5). It appears that the popularity of the card system lay in the manner in which students could use it **independently**; contrary to the other techniques introduced in this study, the card system did not require the same cognitive input, and reliance on classmates for ideas, and was therefore something that could be used almost at will throughout the day (e.g. between classes, before bed). Some students also tended to modify the system to incorporate some of the other techniques by including images or short phrases/stories on the cards.

This flexibility of the system and the independence it accords learners seems to have made this system particularly attractive and easy to use. One student, Elizabeth, actually withdrew her use of this technique in week five to verify the effectiveness of the technique. She found that the words she had rehearsed using the card system had indeed been retained.

Students stated that they found that the frequent rehearsal enabled them to recognize the words immediately in their reading (and other situations outside the vocabulary learning training sessions). For instance, one student stated:

> *Now, I found some words I am learning in the cards can be encountered in*
> *my preparations for the Band-4. That made me feel excited because I could*
> *remember their meanings. That is, I know them. I think in the past, I can't*
> *do it.*

Ironically, it was the preparations for the Band-4 examination that resulted in students employing the card system and other techniques less frequently than before. It seemed that, under pressure, students reverted to their more familiar learning technique, rote memorization.

The one disadvantage of the card system was that, as their learning progressed, the number of cards was constantly increasing; as a result, students did not have time to revise all of them and some of the items were forgotten. As another student said,

> *I found there are so many cards piled on, and when I looked back to review the cards made at the beginning of the term, a lot of them seem both familiar and unfamiliar to me. I need to think about their meaning for a while.*

Student Enjoyment

Overall, the study sessions proved to be an enjoyable learning experience for the students involved. During the training sessions, this was evident in the enthusiasm and interest shown by the students, especially when attempting to generate keywords and story chains. It is also worth noting that the students seemed to enjoy the group discussions, since, with one exception due to illness, all eight of them turned up for each meeting. As one student stated, '*in the past, when I was seeing the vocabulary list, it was painful. I never have enjoyed learning the words like this. I think I find a good way to learn words*'.

Another reason students appeared to enjoy learning during the study sessions is that they were now equipped with a number of vocabulary learning techniques, any one of which they were free to use in order to commit the target item to memory. Rather than relying on rote, students had a choice in how they learned the words and, as one of the learners commented, '*we can find more easily one or more impressive one to learn the target words. It is these options that make us continue to do it*'.

Implications

There is no doubt that for learners, and for Chinese learners in particular, going beyond rote memorisation requires a high degree of interest and dedication. Convincing students to take a new vocabulary technique on board represents an enormous challenge to teachers. This study shows that by intervening early in students' academic studies and working in small groups, a persistent teacher can indeed succeed in persuading students to adopt a new approach and, arguably more importantly, carry it beyond the classroom.

Related to the above observation, and possibly even more importantly, was that by practising the techniques in small groups, students appeared to gain confidence in their ability to produce worthwhile keywords, images and stories. For example, initially, three students, while clearly attentive and cooperative, tended to let other students take the lead in almost all discussions and contributed minimally to the creation of keywords and story chains. However, by the fourth

training session, they began to volunteer their ideas in group and class discussions, with one particularly reserved student actually initiating discussions from week five – something she had never done in English class prior to this.

Summary and Conclusion
Of all the three vocabulary learning/rehearsal techniques introduced to the learners, using the card system, rather than word lists, was universally adopted; in addition, students claimed that this practice enabled them to remember much better than with rote. They also acknowledged that keywords, and to a lesser extent, story chains, though often difficult to find, helped in memorization, along with imagery. The fact that they employed a communicative learning approach, discussing words together in groups, was clearly beneficial in making them think about their learning; the fact that they would often hear the words as well as see them, also doubtless had a positive impact on their learning. The obvious enjoyment that they derived from using the different techniques and the pleasant and relaxed learning atmosphere proved a strong motivational factor that carried over into their English learning in general.

This study suggests that by intervening early in students' academic studies and working in small groups, a persistent teacher can indeed succeed in persuading students to adopt a new approach and carry it beyond the classroom. Just as importantly, it is possible for vocabulary learning to be an enjoyable rather than stressful experience for students. However, there is no doubt that for learners, and for Chinese learners in particular, going beyond rote memorization requires a considerable time, cognitive and personal investment. Convincing students to take a new vocabulary technique on board, therefore, represents an enormous challenge to teachers.

The findings of this study suggest that when introducing vocabulary learning techniques that depart from the students' established, familiar learning habits (such as Chinese learners' reliance on rote memorization), one or two explanations to an entire class of 30+ students are unlikely to be productive. As an alternative, teachers might consider working intensively, over a number of sessions, with small groups of learners; the aim is not so much to explain the techniques but to offer support in the additional cognitive effort required of learners in 'learning' a new technique. A teacher can achieve this by providing plenty of opportunities for guided practice in the initial stages and facilitating reflection on their learning.

Finally, as Pica (2005) has urged, research should be undertaken in the classroom as opposed to the laboratory given that the conditions are very different. This was discovered early as, after much testing in an experimental environment, the

keyword method was unsuccessfully applied in teaching (Fuentes, 1976). Subsequent research, like that, for example, of Kaminska (2002) and Condon (2008) as well as that of the investigation being reported here shows that it can be carried out. As so much pedagogical research has demonstrated, the teacher's commitment and involvement in the techniques or strategies being taught is of crucial importance. The recommendation, therefore, to teachers is to investigate, evaluate and question one's approach to teaching on a regular basis: armchair linguists may offer good ideas but teachers are best placed to establish the extent to which techniques, traditional or new, fully realize the learning potential in the classroom.

The positive response from the students who made up this small group has encouraged us to take the investigation further. Already this semester, the first author has had a series of meetings and the following improvements are being made. In order to counter the organizational problem resulting from the increasing number of cards, the teacher is encouraging the students to employ the method advocated by Mondria and Mondria-de Vries (1994), i.e. using spaced rehearsal and keeping cards in different boxes. Also, students will be encouraged to write on their cards longer collocations, phrases and chunks of language, even whole sentences, in accordance with Lewis's (1993) recommendation. We shall also endeavour to group the words to be learned according to semantic fields and tackle the problem of confusing words of similar form. The goal that we have set is not simply to wean students away from rote and permanently acquire different learning strategies but to see if within the context of an intensive reading course, group work of the kind we have been doing cannot be organized within class time. This will be an even greater challenge.

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