USING MNEMONICS TO IMPROVE VOCABULARY, BOOST MEMORY AND ENHANCE CREATIVITY IN THE ESL CLASSROOM

Nirmala Ramakrishnan Pillai
SMK Ideal Heights, Selangor

ABSTRACT

In line with the aspirations of the National Educational Philosophy and Vision 2020, schools are expected to produce students who are not only proficient in English but are also creative and innovative. However, weak and average ability students in the ESL classroom at both the lower and upper secondary levels have been found to have problems with vocabulary, spelling and pronunciation despite years of learning the same thing. One technique that has been found effective to address the above problems in the ESL classroom is mnemonics. This paper provides information on how visual mnemonics, physical mnemonics and other mnemonic devices can be used in the ESL classroom to improve vocabulary, boost memory and enhance creativity.

Introduction

Mnemonics (pronounced as "ni-mon-iks") comes from the Greek word "mnemon" which means mindful. According to Solso (1995), mnemonics are techniques or devices, such as a rhyme or an image, that serve to enhance the storage and the recall of information contained in memory and they can be either verbal or visual in nature. Mnemonics have been proven to be extremely effective in helping people remember things (Mastropieri & Scruggs, 1989; Bulgren, Schumaker & Deshler, 1994). As mnemonics are systematic procedures for enhancing memory, their particular use is in developing better ways to take in (encode) information so that it will be much easier to remember (retrieve). If material is presented in a way which fits in or relates meaningfully to what is already known, then it will be retained for relatively long periods of time and thus retrieval through verbal or visual clues becomes quite easy. In other words, by using mnemonic strategies, teachers can relate new information to information students already have locked in their long-term memory.
However, it should be noted that mnemonics is not considered to be just the skill of simple memorization, but rather a true, rigorous art which requires imagination, effort and a good mind. All mnemonic systems attempt to impose a plan of meaningful organization. The best of them “work as a memory aid precisely as they mimic natural organizational schemata associated with meaningful material” (Wingfield, 1979).

Many students with disabilities and those at risk of educational failure have been consistently shown to have particular difficulties remembering academic content. Mnemonics can be used to increase learning and memory of these groups of students. While we as teachers are constantly telling students that this or that material is important and that they should remember it, we generally do not tell them how to accomplish this. Through the active (or even supplemental) use of mnemonics, we can now effectively do this (Gray, 1997).

Empirical studies in the field of cognitive psychology (Searleman & Herrman, 1994; Ormond, 1995) which have been conducted with college students involving free and serial recall and association learning show that when an individual learns new material, he or she is not just a passive recorder of associations, but an active participant who manipulates information according to various memory strategies or systems. These processes are contingent upon what is being studied, the personal experience of the learner, and the kind of work at hand. Students will remember information which is meaningful and personal to them. Furthermore, people are likely to remember things that are unusual, outrageous or out of place (Paul, 1996).

Creative avenues must be exploited to give all children the chance to achieve some level of success. It is our duty as responsible teachers to promote creativity as a right for every child. (Beetlestone, 1998)

**Mnemonics and Language Learning**
Building a large vocabulary is essential when learning to read in a second language. Simply put, people with large vocabularies are more proficient readers than those with limited vocabularies (Beglar & Hunt, 1995). In the field of language learning, mnemonics has mostly been used for the learning of vocabulary. One cognitive strategy that has proved to be effective in the memorization of vocabulary is the keyword technique (Atkinson, 1975) in which students connect the sound of a word they are learning to one they already know in either their first language or the target language. They then create an image to help remember the association (Pressley, Levin & Delaney, 1982). This technique provides a powerful tool with respect to words which have a high degree of “imageability” (Richardson, 1980) or
to word pairs between which the learner can form some kind of semantic link (Ellis, 1995). Students will find this technique useful with words that are particularly difficult to remember. The important thing is that the mnemonic should clearly relate to the thing being remembered.

Linking new meanings to language that is already known can positively affect vocabulary learning (Richardson, 1980; Schmitt & Schmitt, 1995; Ney, 1996; Gray, 1997). These links are now more commonly known as cognitive strategies, and are widely reported in vocabulary-acquisition research. For the most part, these cognitive strategies take the learner beyond meaningless repetition, and provide mnemonic devices that produce a deep level of semantic processing of the word in question (Craik, 1979; Sievick, 1976).

Mnemonics and Learning Styles
The way in which people learn affects the sort of mnemonics they should consider using to store information. According to Paul (1996), the way in which we learn best can be categorized into visual learning, auditory learning and kinesthetic learning. Visual learners find it easier to remember things they see either written, in picture form or as a picture in the mind. Auditory learners learn best by hearing things. They remember what they hear more easily than what they see. On the other hand, kinesthetic learners learn best by actually doing it through touch and movement. They prefer hands-on learning to just seeing or hearing about something. However, it is very uncommon to come across a student who is solely a visual or an auditory or a kinesthetic learner.

Classroom Application: The Teacher’s Voice
I first came upon the idea of using visual mnemonics while teaching special children. According to Jefree and Skeffington (1980), mentally handicapped pupils who have reached the stage of ‘reading’ or responding to pictures need help before they can respond to words in print. One way of bridging that gap is to use symbol accentuated words (word pictures) which I would refer to as visual mnemonics. Another piece of material which further enhanced my interest in visual mnemonics was an article by Richard MacAndrew in the Practical English Teaching magazine (December 1985) entitled “Picture a word.” According to MacAndrew, this idea could be used to help elementary level students remember vocabulary. It involved designing pictorial representations of words to make them more memorable. For example, the ‘u’ in music could be turned into musical notes and the ‘x’ in axe could be turned into musical notes.
I have been using mnemonics (both visual and other mnemonic devices) since 1989 with weak and average ability students at the lower secondary (Remove to Form 3) and upper secondary levels (Forms 4 and 5) in Perak, Kedah and Selangor. These students have studied English for several years and some have developed a negative attitude towards the language. They also do not come from English speaking homes, find learning English difficult and suffer from poor concentration.

I first started using mnemonics to teach confusing words (eg. lend/borrow, principal/principle, stationery/stationary, price/prize, weather/whether, bored/boring, desert/dessert, life/live, affect/effect, eligible/illegible etc)) to Form 4 and 5 students in a secondary school in Sungai Siput, Perak. I continued using them while teaching upper secondary students in Kedah. ‘Identification of Errors’ was a section which was tested in the SPM examination and I did not want my students to guess the correct answer or simply learn without understanding. By using mnemonics, I found that my students could easily tell me the meaning of each confusing word and at the same time they had fun. This could be due to the fact that ‘the more colourful, funny and vivid the mnemonic, the more easily the word can be remembered.’

While teaching the weak and average ability students in the Remove class and Form 1 classes in Selangor, I found that they had problems with even simple grammatical items such as subject pronouns, possessive adjectives and subject-verb agreement. Even though these topics are covered in the primary school, students still find them problematic at the secondary school level. According to Chitravelu et al., (1995), the third person singular (he/she/it) is not distinguished for gender in Bahasa Melayu and Mandarin. I have found this true not only of Malay and Chinese students but also of the Indian students. The students would easily forget what they were taught so I created my own visual mnemonics to help them (Appendix 1). My students also had problems with possessive adjectives namely his and her so I devised a mnemonic strategy to address this problem (Appendix 2).

Another problematic area for my students at both the lower and upper secondary levels is ‘Subject-Verb Agreement.’ Chitravelu et al., (1995) state that the rule of subject-verb agreement in English does not have a parallel in Bahasa Melayu or Mandarin. Therefore, Malay and Chinese pupils often face problems with subject-verb agreement. To help students remember the rules easily, I came up with a formula (Appendix 3).

Apart from that, I have also used visual mnemonics to help students improve and remember core vocabulary related to description (Appendix 4), moods and emotions (Appendix 5) as well as confusing words (Appendix 6) which are listed out in the syllabus. According to Chitravelu et al., (1995), visuals are extremely effective in conveying meaning. Lewis (1990) observes that word association and
imagery have long been recognized as one of the most effective ways of absorbing information, since the visual/pictorial memory is stronger than the visual/verbal memory.

In my ESL classroom, I have also used visual mnemonics and other mnemonic devices to help students remember the spelling of words (Appendix 7), pronunciation of words (Appendix 7) as well as tenses (Appendix 8). According to Gordon (1998), English spelling is notoriously difficult. This is because the relationship of sound to letter symbol is less regular than in many other languages. In teaching pronunciation of certain words, I have asked students to associate the words with the L1. A technique which can be very effective when learning the basic vocabulary of a new language is to attempt to make some sort of ‘meaning bridge’ between the target word and its L1 translation. It does not matter how far-fetched or ridiculous the bridge is. Some would say that the more grotesque it is, the better for memorization. It also helps if the bridge can be clearly visualized in the learner’s mind (Wallace, 1987). I have also adapted the Narrative Chain mnemonic strategy to help Form 4 and 5 students remember singular nouns (Appendix 9).

In 1997, during my school’s English Language Week, I gave some examples of visual mnemonics (taken from the Practical English Language magazine and “Let me read”) to Lower Secondary students. I also gave a list of words that students could refer to and asked them to come out with pictorial representations of these words. It was very encouraging to note that some students came up with their own list of words. Displaying the students’ pieces of work for the other students and teachers to view was one way of boosting the self-esteem and morale of the students.

These original and very creative pieces of work provided me the impetus to try using visual mnemonics with Form 4 students of weak and average ability during the Kota Setar district English Language fest which was held the following year. I gave these students an entirely new list of words to work on. The more enterprising students came up with additional words. I also provided dictionaries and a copy of ‘1000 pictures for teachers to copy’ by Wright, A. (1985). Students from different schools worked together in a non-threatening environment and came out with original and very creative as well as colourful pieces of work. I found the students’ very enthusiastic and engrossed in their work. The leader of each group came up to the front and exhibited his or her group’s work and shared briefly their experience of working together. The majority of students said that they had never done such an activity before and it was novel and enjoyable. These students also taught me that although each group was given the same word, they perceived it in different ways and the result was one word being represented visually in different ways. As an ESL teacher, I might have opened the eyes of my students to the world of mnemonics.
but at the same time, I have learnt from my students to see words from their perspective and the importance of relating it to their background so that learning becomes engaging and meaningful to them. According to Chiam (1995), parents and teachers have the tendency to coerce children to perceive the world from the adult’s perspective, criticize their ideas, curb their fantasy and imagination and evaluate their success or failure according to adults’ perceptions and standards.

Some of my students in the Remove Class and Form 1 in my present school have become so interested in visual mnemonics that they have been inspired to come up with their own mnemonics. One of the Remove class students presented me with a compilation of several original pieces of mnemonics which she had done by herself. I was also pleasantly surprised when a Form 1 student gave me a pictorial representation of a ‘gecko’ which he had done. A few days earlier, I had told his class that another Form 1 boy was so creative and enterprising as to make geckos and crocodiles out of beads and sell them.

I am still experimenting with mnemonics and I can say that it has been a very satisfying rewarding experience so far. For instance, in 1998, one of my students designed a pictorial representation of a “safety pin.” She had turned the ‘i’ into a safety pin. Last year, I cut out words from the newspaper and replaced the ‘i’ with the picture of a safety pin. Teachers are always encouraged to use realia in the classroom so this year I decided to replace the ‘i’ with a real safety pin!

Here are some ideas for the use of mnemonics in the ESL classroom.

a. Relate the language to the students themselves as this will make the language more meaningful and memorable for them. (Tice, 1997)

b. Connect the spelling, pronunciation and new words to the student’s prior knowledge or what he already knows. Thus, the teacher increases the probability of reaching out to the majority of students in the classroom.

c. The odder, more comical and more personal the associations, the more likely they are to be encoded. (Fletcher, 2001). Our brains are good at remembering unusual or silly things. The silliness factor helps hook the information together.

d. Use of multi sensory techniques such as colours, visual pictures, songs, rhythms, or movement often capitalize on students’ strengths. Link the words to the pictures as most of us have powerful visual memories (Fletcher, 2001). Images which are concrete, sensory, practical, interactive, and interesting have a much greater rate of recall than those which are not (Ormond, 1995).

e. Children who learn differently, especially dyslexic children and those that struggle with language development, tend to learn best with active learning and creative involvement with the task or concept.
Tangible objects are much easier to visualize than are intangibles. The tangibles are usually concrete nouns which are the easiest to visualize because most of them have been seen at one time or another and you know what they look like (e.g., flower). Intangibles include abstract nouns (e.g., truth) which are not as easily pictured.

Benefits to Students

Mnemonics have important implications for teaching and learning. My classroom experiences using mnemonics since 1989 strongly support the fact that students who use visual mnemonics and other mnemonic devices are able to retrieve information more effectively and for longer periods of time. Apart from boosting their long-term memory in learning and remembering vocabulary, spelling and pronunciation, the students are also active participants in the learning process. Mnemonics also motivate the students to be more creative and enjoy using their minds more productively. Even weak students who are often considered “failures” in our examination-oriented system can produce original and creative pieces of work which is a testament to the fact that every child has potential and it is up to the teacher to unearth the Picasso in them. According to Fletcher (2001), it would be great if each person in each class felt themselves, at least for a moment to be a “star.” As a teacher, I believe that children should be provided tasks which will enable them to be engaged in creative and imaginative thinking. This opinion is supported by Beettlestone (1998) who states that the classroom should therefore, provide a safe environment for risk taking, problem solving and experimentation, which will provide the necessary challenge and opportunity for originality.

Conclusion

It has been found that the use of mnemonics can enhance the ability of the students to organize and retrieve information easily. This in turn helps increase the students’ self-esteem as well as their learning. Visual mnemonics for instance can be exploited to bridge the boundaries between words and their meanings. The ultimate goal is for students to use the strategies learned while using and creating mnemonics to enhance lifelong and independent learning. As the classroom ESL teacher knows his students best, he should adopt or adapt the mnemonics according to the background of his students and make learning as meaningful and engaging as possible. According to Kyriacou (1986), we should see teaching as involving a change from a “passive acquisition of knowledge” towards activities which help
children "to discover and develop their creative abilities by doing, making and organizing."

It is hoped that mnemonics will open up children’s minds and release the treasure within.

References


Subject Pronouns

a) For the pronoun I, I highlight the letter I in the drawing. Then, I ask each pupil to point his or her fingers at himself or herself as seen in the visual mnemonic.

b) For the pronoun We, I tell pupils that if the pronoun I is included, then they would have to use We. I highlight the pronoun I in the drawing. Then I get 2 or more pupils to do the actions as seen in the visual mnemonic.

Wendy and I (We)  My parents and I (We)

c) For the pronoun You, I draw one arrow in the letter U to highlight one person being talked to. Then, the pupil is asked to point to just one person he or she is talking to (as seen in the visual mnemonic)

YOU

Then, I draw several arrows in the letters Y and U to highlight many people being talked to. Then I ask the pupil to point to a group of students he or she is talking to (as seen in the visual mnemonic)
d) For the pronoun They, I draw the arrows in the word They to indicate that 2 or more people are being talked about. I tell the pupils to point to two pupils or a group of pupils inside or outside the classroom.

\[\text{They}\]

c) For the pronoun He, I ask pupils to remember male names such as Helmi and Henry. I highlight the pronoun He in the names.

\[\text{He} \rightarrow \text{Helmi} \rightarrow \text{Henry}\]

d) For the pronoun She, I ask pupils to remember female names that they are familiar with such as Sheila Majid and Sheena Easton. I highlight the pronoun She in the names.

\[\text{She} \rightarrow \text{Sheila Majid} \rightarrow \text{Sheela}\]

g) For the pronoun It, I write the word Italy and highlight the pronoun It. I tell pupils that it can be used for places. Then I write Information Technology and highlight the pronoun IT. I tell pupils that it can also be used for things.

\[\text{It} \rightarrow \text{Italy} \rightarrow \text{Information Technology}\]
POSSESSIVE ADJECTIVES

a) To reinforce the learning of the possessive adjective **His**, I write down “**Hisham's bag**" and highlight the letters **His** in the name.

b) To reinforce the learning of the possessive adjective **Her**, I write down “**Herdawati's bag**" and highlight the letters **Her** in the name.

Hisham and Herdawati are local male and female names that pupils are familiar with.

![Diagram]

- **HIS** → **HISHam's bag**
- **HER** → **HERda's bag**
SUBJECT-VERB AGREEMENT
My students in both the lower and upper secondary levels have problems in this area. After much trial and error, I hit upon using the formula HITS. I write down the word HITS and ask students the following questions:

i) Which pronoun begins with H?
ii) Which pronoun begins with S?

After the students have given me the answers, I tell them to look carefully at the letters contained in the words "He, It and She." Then I write down the formula that is:

H
I
T
S
he + 's', 'es', 'ies'

The letters 's', "es" and 'ies' are contained in the words He, She and It.

After that I write down the pronouns "I, We, You and They." I ask students to look carefully and see whether the letters 's', 'es' and 'ies' are contained in the above words. Then I write down the formula:

I
We
You
They
no "s", 'es', 'ies'
DESCRIPTION
When I teach the topic of description (objects or people), I highlight the shape in the word itself:

a) Round face

b) Oval face

c) Squarish face

d) Triangular

e) Rectangular
MOODS AND EMOTIONS
The emotion is highlighted in the word itself. I have provided some examples.

a) Shocked

b) Nervous

c) Frightened

d) Dissappointed
CONFUSING WORDS
Some of the examples which I have used with my students are highlighted.

a) QUIET and QUITE
I tell pupils to imagine that they are watching the film ET. So they have to keep quiET. I spell out the word and stress the letters ET to help them remember.

b) STATIONARY and STATIONERY
For the word stationary, I write down Parked car and highlight the letters AR.
For the word stationery, I write down paper, eraser and ruler (writing materials). I highlight the letters ER in the above words.

StationARY  →  PARked cAR

StationERY  →  rulER
               papER
               erasER

c) LIVE and LIFE; SAVE and SAFE; PROVE and PROOF; BELIEVE and BELIEF; RELIEVE and RELIEF.
Live, Believe, Relieve, Prove and Save are all Verbs. I highlight the letters Ve in those words and highlight the letters Ve in the word Verb.
Life, Safe, Proof, Belief and Relief are nouns.
d) BORED and BORING ; INTERESTED and INTERESTING

In the words Bored and Interested, I highlight the letters ED. I tell the students that Ed (a person) is feeling bored or interested.

BorED
InterestED

ED ( a person) is borED or interestED.

In the words Boring and Interesting, I highlight the letters ING. I tell the students that the book or movie (a thing) is boring or interesting.

Note
Students are also told that they can use the expression "a boring or interesting man".

BorING
InterestING

The movie or book (thING) is borING or InterestING.

e) LEND (to) ; BORROW (from)

For the word Lend to, I highlight the arrow in the word to.

Lend ➔

For the word Borrow from, I draw the hand to denote that the person is borrowing something (e.g. money) from someone.

Borrow $ from
SPELLING and PRONUNCIATION

From my experience, I have found that if students associate words with their own background (example names of classmates, singers, film stars, buildings etc they will remember easily how to spell and pronounce the troublesome word. For example, once while teaching the sixteenth class in Form 1, I wrote several words on the blackboard including the word ‘small.’ I was really surprised to hear students mispronouncing this word which to me was a very simple word. I decided there and then to take a chance and try something unconventional. My rationale was that if I failed, I still had the satisfaction of knowing that I had tried. There is a shopping complex nearby which all my students are familiar with, that is Selayang Mall. I told the students to repeat after me “Selayang mall – small” several times. A few days later, I wrote the same words that I had taught them during the previous lesson. I told the students that some of them would take on the role of ‘teacher’ and the others would be the students. As facilitator, I would help if the ‘teachers’ faced any difficulties. One of the students had problems when he came to the fourth word. His ‘teacher’ immediately prompted him ‘Selayang Mall’ and without hesitating, he blurted out ‘small.’ To me, that was indeed a breakthrough!

Another word that the students in this class had problems with was “straight.” My students were Hindi movie fans and were familiar with the former Miss Universe and actress Aiswarya Rai. First, I told them to remember that the letter ‘t’ came after the letter ‘s’ and the letter ‘h’ came after the letter ‘g’. The word ‘straight’ also contained the letters ‘rai.’ To boost the students’ memory, I also showed a photograph of Aiswarya Rai with long, straight hair.

Many of my students had problems pronouncing the words ‘stomachache’, headache and toothache. To help them remember the pronunciation of stomachache, I divided it into 3 parts (sto—mach—ache). First I asked students to complete this sentence: Twinkle, twinkle, little star. Then I told them that they would shout out for their “mak” (the Malay word for mother) when they had a terrible stomachache. To remember the pronunciation of “ache”, I told them to associate the word with the Chinese name “Eik (pronounced as “Ache”) Choon.” Eik Choon had a stomachache while singing Twinkle, Twinkle little star so he shouted for his “mak.”
Another instance when I used the concept of association was in teaching the pronunciation and meaning of the words “eligible” and “illegible.” To help students remember the pronunciation and meaning of eligible, I tell them that the Alleycats (a popular local band) or Ally McBeal are eligible to enter the drama competition. On the other hand, to teach the pronunciation and meaning of the word “illegible” I usually scribble something on the board. Then I ask students the following question: “Do you understand what I have written?” The expected response is “No.” Then I tell students to look closely at the first four letters of the word (ille) which in Tamil means “no.” This is a word that most Malaysians whether they are Chinese, Malay or Indians know for sure. Students are asked to check up the meaning in the dictionary and I help them relate the word to the letters “ille.” In fact, whenever I used to have quizzes or games, the students would purposely stress the first four letters in the word “illegible” although they knew the correct pronunciation. To me, the stress of learning was reduced by using mnemonics!
TENSES

Many of my students have problems differentiating the different tenses namely Simple Past, Simple Present and Simple Future tense. I write down the words and use the arrows and the position of the eyeball to highlight the differences. Then I teach them the structures.
The Narrative Chain mnemonic strategy

I have adapted this strategy to help Form 4 and 5 students remember singular nouns. I relate a story in which the student is the main character. I ask students to listen and write down the missing word.

Before I get ready for school, I make sure my shirt and trousers are ironed. I always wear clean clothing to school. I go to school to gain knowledge. My teachers always tell me to study hard. They give me good advice. Every Monday and Thursday, I go to the Science Lab. We do experiments and my teacher asks us to handle the test tubes and beakers carefully. We must take care of the equipment in the lab. My teacher also gives us some exercises to do at home. In other words, she gives us homework. She also tells us not to throw litter on the floor. We also make sure that we do not damage the chairs and desks. We take care of the furniture.

When I go home, my mother tells me to sweep the floor and wash the plates. I do the housework before watching television. I also read the newspapers in order to get the latest information about football.

In the evening, I go with my mother to buy a pair of earrings and a chain for my elder sister. I am sure my sister would love the jewellery. On the way back, we pass the padi field where there are lots of cows. The scenery is really beautiful. Unfortunately, there are lots of cars, buses and lorries on the road. We reach home late because there is a lot of traffic on the road.