A Micro-Case Study of Vocabulary Acquisition among First Year Engineering Students

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Abstract

Vocabulary knowledge is very essential to be proficient in any second language. Effective use of Language lies in the way one uses its words. The second language teacher always has a question in her mind, "What should I do to enable my students acquire a good stock of words?". This paper aims at giving an answer to this Question. It is a micro-case study of I year engineering students using various teaching strategies while teaching them vocabulary. It has also evolved effective strategies that can be used by English teachers for teaching vocabulary successfully.

Little Emphasis on the Acquisition of Vocabulary

It used to be the case, in the past, in Indian schools that vocabulary and grammar were greatly focused upon. Students showed keen interest in learning, memorizing and using new vocabulary with great zeal. Interest in demonstrating this skill was widespread across all age groups. Exam papers also had some focus on vocabulary skills. This situation seems to be changing in professional colleges whose curriculum places greater emphasis on acquisition of engineering and technology content. As emphasis on

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communicating such acquired knowledge through innovative means begins to get our attention, students will begin to learn more communicative and effective vocabulary items.

In English language teaching, only the elements of grammar and the other competencies are the central focus. There has been little emphasis placed on the acquisition of vocabulary. This lack of vocabulary competence among the students affects all the four skills: LSRW namely Listening, Speaking, Reading and Writing which are essential for language proficiency.

In this paper, I present a micro case study done among I year Engineering students using various types of vocabulary learning strategies. At the end of the research, the class-room based study suggested several strategies that can be used effectively in teaching vocabulary to students.

Mastery in Vocabulary Skill Has Several Benefits

When students have vocabulary mastery, they can more effectively communicate their ideas, knowledge, and voice. Oxford defined the domain of language learning strategies as, "operations employed by the learner to aid the acquisition, storage and use of information….; specific actions taken by the learners to make learning easier, faster, more enjoyable, more self directed, more effective and more transferable to a new situation" (Oxford 8).

Vocabulary knowledge plays a significant role in people's lives and future possibilities. In fact, it is clear that a large and rich vocabulary is the characteristic of an educated individual.

According to Armbruster, Lehr, and Osborne (2003), the two ways in which vocabulary is learnt are indirect and direct vocabulary instruction. Indirect vocabulary building pertains to learning words primarily through exposure — through conversations with others, being read to, or reading on one's own. Thus, if the students participate in rich oral and reading vocabulary experiences, the greater will be their vocabulary knowledge.

To Overcome Limited Exposure

Unfortunately, many students have limited linguistic environment for vocabulary development for a variety of reasons.

Students also learn vocabulary directly through explicit instruction. Researchers have studied the effects of a wide range of explicit approaches to vocabulary instruction in the class rooms. These instructional approaches include: (a) key word (b) repeated multiple readings (c) rich contexts (d) computer-based (e) pre-instruction and (f) restructuring the

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task. Overall, they suggest that explicit vocabulary instruction methods improve vocabulary knowledge and the effects are greatest for students with low initial vocabulary knowledge levels.

Technical English and Vocabulary Acquisition

The subject *Technical English* is new to engineering students. In their school days, these students learned English through grammar and English literature. For engineering students, English is a necessary tool for getting into a good job and for a cosmopolitan business and technical outlook.

So, the aim of the subject *Technical English* is to encourage the learners to involve in learning the target language and to acquire proficiency in technical communication. Some students, out of personal interest and motivation, or even perhaps because of their family backgrounds where English may be used for interpersonal interactions, learn vocabulary through extensive reading. But many students are highly dependent on the teachers for the development of vocabulary.

The Quantum and Features of Vocabulary Needed

For those who seek to use English for specific purposes, it is indispensable to learn about 1000 to 2000 additional words related to the field of engineering.
When students want to learn the meaning of a word, they refer various sources like dictionaries, Thesauruses and other word books. Though they refer those books, they may not be sure of the usage of the word until they learn to use it appropriately.

Slow learners, if they do not take their own effort to learn, are caught in a difficult situation when they do exercises like reading comprehension, essay writing, etc.

Students realize the need for good use of vocabulary when they are stumped for the right word to use.

To develop their basic vocabulary for effective reading, speaking and writing, it was decided to teach them three words a day during the first semester.

Strategies Tried for Vocabulary Teaching

Participants Method 1 - Vocabulary Drill

Students were taught those three words by splitting into head word and derivatives, with the pronunciation, word class, meaning of the word and usage. At the end of the semester, when they were given 25 words and were instructed to write the meanings and

their usages. Nearly half of the class was able to do about 15 words and the quarter of the class managed to write only 10 words.

There were also students who could not even attempt to write three words. Then it was realised that rote vocabulary drills would end up as a failure and they are not brain-stimulating active learning endeavours.

A list of vocabulary that does not have personal relevance can be tedious and students may not remember the meanings of those words. They may store the meanings of the words that they have learnt only for a short term, try to recall them and soon forget.

It was noted that some students had written the meaning correctly and had gone wrong in usage, especially in the use of collocation.

Method 2 - Exploring the affixes

In the next semester, to the same class, a different strategy was adopted to teach them vocabulary. Instead of teaching them three different words, only one word per day was taught by analyzing its possible affixes, and its usage in a sentence.

For example, for the word 'clean'- cleanable, unclean, cleanliness, cleanly, self-cleaning and so on:

Teaching of prefix
Word: continental
Word Meaning: national
 Prefix: Inter
Prefix meaning: between

When the prefix comes before the root word, it changes the meaning of the word as 'between the continents'. Besides teaching them the possible affixes, a situation can also be created to make the learning interesting.

Method 3 - Using Reading comprehension

Along with these kinds of simple words, difficult words, which are not familiar to the students, are taught to them which they could use in 'serious academic writing' using a reading comprehension. This kind of reading material is usually written with a specific vocabulary range and they prove that the learners with repeated exposure to vocabulary, syntactic structures can do better.

Prose Passage

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Taylorism is the scientific management of production, in essence its characteristics are the high division of labor. Its often related to Fordism, which is the line assembly approach to production, high standartization of the product and elimination of skilled labor. It complements taylorism because it requires a high division of labor and careful study of each job. So, from the 70s to the 90s, this classic way of organizing industry saw a decline and a new form, much more efficient started to take place. It creates a much more economically efficient way to produce things, eliminates the need for stocks eliminates a big part of the risk .This is why many eastern motor companies grew amazingly from 90s to now, a much cheaper and efficient way. And what does it all has to do with the Music Industry?

We can relate the actual way music is produced as a mass production style, highly fordist way approach. Mainly music industry is used to release tons of copies on the market and 'hope' it will sell to pay the costs/get profit. That is why the music industry is usually facing overproduction, excess of supply and when oversupply meets underconsumption, we have crisis. And if you ask me, where is the music industry going? I would be categorical: we are heading to toyotism in music industry. We are heading to get the product after we make the sale. Technology, modern logistics, easy of information and highly automatized production can easily allow this change in a short time period. In US, from the top of my head, i only see CD Baby using the "on-demand" pressing/distributing system but I'm pretty sure that must be others. In Europe I dont know of none. But it is no mistery that these type of on-demand publishers have better deals to musicians and independent labels, they transparently present their "costs of production" and we know how much we will charge to get a reasonable share of the sales. But what does it change for the factory floor of the Music Industry?

Well it changes everything. As we are talking in many threads, until `just recently Labels always entered with the risk part of the job. They fund albums hoping to sell and get the costs/profit back, a classic fordistic type of business subject to the uncertainties of the market it can't control. During its history the Music Industry, even maintaining its fordistic type of production, tried to eliminate the risks (as any other industries) and started over monopolizing the fields, to assure sales. Hence the studio /foundation period of 50-60s, the merge with distribution companies 70-80s, the merge with broadcast companies 80-90s, and more recently, advertising companies 90-00s, creating the overpowered big four controlling 80% of all the music market. The risk part of the business is the main, maybe the only, justification for the high % of shares of copyrights of the final product. And here is where everything changes for the 'fabric floor' if the risk part is eliminated, the actual album is produced after its sale, how can their copyright shares be justifiable? This is no rhetorical question. (http://www.gearslutz.com/board/music-business/511028-fordism-toyotism-real-future-music-industry.html)

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Though words are learned in different ways, they are best introduced as parts of a large meaningful unit like Reading Comprehension passages. The teacher can highlight the new words found in the comprehension and the students can look into the syntactic structure and try to guess the meaning. For example, the word 'underconsumption' can be split and understood. They can be asked to match the words with definitions:

Fordism- *It, is the line assembly approach to production, high standartization of the product and elimination of skilled labor.*

Good readers may guess the word meanings. The context can help them to infer the meanings. Drawing inferences may not be simple if there are no clues. (e.g.,) rhetoric

In fact, it is clear that a large and rich vocabulary is the hallmark of an educated individual. A large vocabulary repertoire facilitates becoming an educated person to the extent that vocabulary is strongly related to reading comprehension in particular and school achievement in general.

Developing expertise with this strategy leads to independence in reading and improved comprehension, for students learn to explore the clues authors placed in texts that enable them to clarify the meaning of new words and phrases. Students can be shown how to discover a word's meaning by exploring clues in the sentence, in sentences that come before or after the unknown word, and in illustrations, diagrams, photographs, and charts.

Model 4 Using Parts of Speech

It is generally believed that only adjectives can be used to improve descriptive writing, but one can expand word choices of nouns, verbs, and adverbs to improve writing as well. The students will be asked to write a description of a picture or their class environment, identify parts of speech and explore different word choices for the words that they chose. Then they will re-write their description or create a story using the new words they have found.

A picture may be chosen from a magazine or book. If none is available, they can look out a window or around the room they are sitting in. They can write for 5 minutes using as many words, phrases, and sentences about the picture or scene. This includes colors, textures, actions, people, animals, etc. They can be as well motivated by putting forth the following questions:

What do you see?
What are the people doing?
How do you feel?
What do they wear?
What's the weather or temperature like?

The students can be made to read through their words/phrases/sentences and underline the nouns, circle the verbs, and put brackets around adjectives and adverbs. A list can be created as follows:

Nouns	Verbs	Adjectives	Adverbs
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

The students can choose a category to start from. They can begin exploring the word connections through some questions.

a) Does this word have connections in all the parts of speech (Nouns, Adjectives, Verbs, and Adverbs)?

b) Which parts show more connections than others? (For example, do you get lots of adjective and adverbs, but no nouns or verbs?)

What Did I Find Out?

At the end of the study, it was found that Method 1 is a failure whereas the other methods are useful and successful.

It is found that even the slow learners could remember; write the meanings of the difficult words and their usages. The exercises challenged the students and they learnt key vocabulary knowledge and reading comprehension skills. They could apply the lesson content in other areas. They responded enthusiastically to the lessons.

Apart from this kind of teaching, extensive reading and free voluntary reading can be much useful for the vocabulary learners.

The result indicates that the memory is better if they are taught through a reading material which has a vocabulary rich context. It also shows that focussing on the meaning of a word should positively affect memory for relating to the meaning of the word as opposed to the form of the word.

Strategies for Effective Teaching of Vocabulary

- Word maps help students develop complete knowledge of a word if they are to remember it for a long time.
- Students can be given a wide variety of reading materials such as newspapers, magazines, pamphlets and other literature of interest.

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- Provide context. Engage in a preview strategy through which the teacher can provide introductory material prior to reading a comprehension. It will capture the students' attention and make a connection between what they know and what they are about to read.
- Wide reading has been found to be an effective way to expand vocabulary among students. The more they read the more words they learn.
- Interact with students using rich vocabulary, reading the words in rich context of a text are more ways of teaching than correcting the students.
- A general question like, "Do you all understand that?" will not help the teacher know the real understanding of students. They may not respond as they are all confused about the meaning of certain words, if not all.
- Learning sessions can be either teacher-centred or learner-centred. In a teacher-centred classroom, teachers teach the required list of vocabulary for a particular passage and provide learners with various skill building activities that focus on vocabulary development and reading comprehension. In a learner-centred class room, learners identify the needed vocabulary for a particular passage and engage themselves in learning vocabulary and understanding the passage. Teachers have to remind the learners that learning what a word means and how it is used in context should always go together.
- Connect the form and meaning. Select a list of words to learn and create activities that provide diverse ways of practice. They can be provided with opportunities for speaking, using, reading and writing so that the words can stay with students.
- Practice vocabulary in a friendly environment since the students are scared of criticism and they are less likely to attempt practice even if they are familiar with the word.

To Conclude

Learning a foreign language is a complex process that benefits greatly the learners who take pro active steps to regulate their own learning. This can be done among other learners by seeking out opportunities for output.

The present study is only a small step towards doing justice to this topic. This study may help future researchers investigate these issues with a larger group in more depth and with more connection to current strategies of teaching vocabulary.

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